An Inaugural Address
ON
SANITARY PROGRESS AND REFORM.

Delivered at a Congress held in Manchester on April 24th, 1895,

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LADIES AND GENTLEMEN,—No one can sympathise with you more keenly than I do in the disappointment you must feel at the loss of the pleasure and profit you would have derived from the address we hoped to hear from Sir R. Rawlinson, and we all share in the regret that his health would not allow of his being present with us to-day. I therefore trust to your forbearance and generosity while I venture to occupy a portion of your time this morning with a few discursive remarks. My first and most pleasant duty is to welcome you most cordially on behalf of the Sanitary Association of Manchester and Salford to this Congress, and as some of those present may know but little of this local voluntary association, you will perhaps allow me to say that it was founded in 1852 by a few gentlemen, some of whom were members of my own profession, others were clergymen, and others philanthropic laymen. Its objects were simple: (1) to promote attention to personal and domestic cleanliness, temperance, and the laws of health; and (2) to aid the constituted authorities in the promotion of sanitary improvement. The association has endeavoured to carry out these objects by: (1) the visitation of districts requiring special sanitary inquiry (one notable instance of this was the exhaustive investigation in 1888 by Dr. Thresh, now the medical officer of health for Chelmsford, into the causes of the excessive mortality of a district in Ancoats; this investigation gave a distinct stimulus to the efforts of the corporation, and was shortly followed by the condemnation of certain parts of the district by the medical officer of health as unhealthy areas); (2) familiar and well-illustrated lectures have been given in schoolrooms or elsewhere to working people; (3) there has been also the distribution of short tracts, lectures, or leaflets to the poor by ministers of religion, school teachers, and the various agents of societies employed in district visiting; and (4) the investigation and discussion of sanitary questions, and the publication of papers have also been carried on. At that time there was much cause for searchings of heart in the condition and surroundings of large masses of the population of Manchester. For a few years after the formation of the association the death-rate varied from 37·2 to 35·7 per 1000; then from 1856 to 1860 it fell to 31·6 per 1000, and the hopes of the sanitarians were raised; but in the five following years it rose again, and in 1865 was 39·0 per 1000. Though the record for Manchester was a bad one, it did not stand alone. Liverpool—of which city Manchester is supposed to be a rival in other respects than the rate of mortality—had a still higher death-rate, and for many years they possessed the discreditable distinction of being the two most unhealthy towns in the Kingdom, sometimes one and sometimes the other holding the first place. If the value of these figures is questioned from qualifying circumstances not having been taken into account, the mortality under fifteen years of age "avoids the errors arising from changes in the quality of the adult populations," and we find that in 1861—not a particularly bad year—the rate for Manchester was 47·5 and for Liverpool 53·4 per 1000. As regards the causes of this great mortality, the geographical situation and the geological formation on which the city rests may be put aside as not affecting it specially. But the earlier records of the association show infractions of the common laws of health, which are invariably followed by disastrous results, for there is no forgiveness for those who break the laws of nature. In a report by Dr. Ransome and Mr. Royston, read at the Social Science Congress in 1866, the following are named among the causes that tend to raise the death-rate: "The narrow courts, the back-to-back houses all overcrowded with inmates, the faulty drainage, the open and fetid cesspools teeming with filth, the atmosphere charged with impurities and noxious gases, and the neglect of all precautions against the spread of infectious disease." Then follows a description of some parts of the town in 1854, showing that very little change had taken place during the interval. The streets were narrow and winding, and but little intersected, so that movement of air was impeded. Here and there great blocks of buildings were crowded together. Numerous courts passed out of these streets, entered by narrow arched passages, and closed often at the ends by high buildings. Sometimes these courts were a few yards wide, sometimes only a few feet, but they were lined with houses on both sides up to six or eight, or more, in number; and the sanitary arrangements were in thorough keeping with the wretched surroundings. Whole streets of back-to-back houses were common, cellar dwellings abounded, and in almost every street and court the cesspools and middens were overflowing. In some houses seven, eleven, twelve, thirteen, and even sixteen persons were living in a space with only sufficient air for the proper supply of one. Night visits were paid, and the state of things disclosed was not one we should connect with a high state of civilisation. The rooms were most offensive, the ceilings often so low as scarcely to allow of a man standing up; and lying huddled together in the same bed were men, women, and children, without regard to age or sex, and for the most part naked. Some lay on bedsteads, but the majority on the floor. Often enough four or five were in a bed lengthwise with one or two across the foot. "In every instance the windows were found closed and the inlets for air stopped up." This life of moral and physical degradation is not one we can think of without horror and loathing; it is not one to make us glow with pride and self-gratulation on the decency, comfort, and brightness of our happy English homes. At that time the corporation had no medical adviser, and the health committee, notwithstanding its anxiety for the well-being of the city, often needed a guiding hand. This association, therefore, urged upon the authorities again and again the necessity for the appointment of a medical officer of health. As the writers of the report referred to said: "By the present method of administration authority is so much weakened and responsibility so much diluted by division that no real change for the better can be made without a complete remodelling of the sanitary department of the corporation and the appointment of a responsible medical officer of health." And in the same year (1866) the late Mr. Turner, the eminent surgeon, at that time chairman of the Sanitary Association, addressed a communication to the authorities, urging on them the importance of making such an appointment. In one paragraph he says: "The reduction to practice of sanitary science is not, as is sometimes supposed, a mere affair of removing what are called nuisances; it involves a great deal more than this—the carrying out of building regulations, so as to secure due ventilation, supplies of water, house drainage, the management of incidental outbreaks of contagious diseases, so that their unnecessary diffusion be prevented, and the skilful carrying out of right methods of disinfection in periods of apprehended pestilence."

As the result in great part of the representations of the association, the late Mr. John Leigh was, in 1868, appointed medical officer of health for Manchester. He was an accomplished, scholarly, and able man, and for many years did good service to the city by his earnest advocacy of sanitary improvement. He was followed in 1889 by Dr. Tatham, through whose exertions much was done to ascertain the extent of the sanitary evils under which we suffered, and to set in motion important remedial measures. We owe to him, moreover, a most valuable series of Life Tables for Manchester, first published in 1892, and afterwards extended so as to include certain recently added outtownships, which will, in his own words, "allow of the formation of a definite opinion as to how the healthiness of the people, measured by their mortality, compares with what it should be according to Life Table standards." But, as most of you are aware, Dr. Tatham was soon lost to Manchester, and is now at the head of the Statistical Department of the Registrar-General's Office. Great was the lamentation of those interested in sanitary progress when they were deprived of his valuable services, though they were proud and glad that he should receive this recognition of his great merits, and much anxiety was felt with regard to his successor. But Manchester is sometimes, perhaps, more fortunate than her deserts, and is especially happy in the fact that Dr. Niven has already proved himself, as was anticipated by those who knew his great ability and distinguished career, worthy to follow

Dr. Tatham. And I must not pass over without mention the name of the chairman of the sanitary committee of the corporation, Alderman Walton Smith. We hear of men of one idea, but though he is a man of many ideas, he is at the same time, if I may say so, a man with one aim, with one object in life—namely, to leave Manchester a healthier city than he found it. Hospital accommodation for infectious diseases, and the removal or satisfactory improvement of unhealthy dwellings, have occupied much of his attention; and happy is it for the dwellers in our crowded towns, struggling as too many of them have to do for bare existence, when men are to be found who will devote their lives without fee or reward to helping those who cannot help themselves; and I may say here that by his warm coöperation with the medical officer of health, courts and blind alleys have been opened out, light and air have entered the dark places of the city, and thousands of unhealthy dwellings have been removed or put into a satisfactory condition—and the work is going on still. As the result of the various agencies at work for a number of years, the death-rate has gradually declined from 39 to 24 or 25 per 1000. With fewer deaths there has been less grievous sickness; the general standard of health has been raised, and the working hours of the labouring classes have been less broken in upon by illness. As Dr. Ransome says in a letter to the Lord Mayor on behalf of the association advocating the maintenance of a high status for the medical officer of health: "The result (of this fall in the death-rate) has been an enormous monetary saving to the community, represented directly by increased working time, and a corresponding reduction of expenses for medical attendance and funerals, amounting annually to many hundreds of thousands of pounds," so that the only sufferers have been the medical profession and the undertakers. But set against this the diminution of pain, sickness, and sorrow, the increased brightness and pleasure of life, and you will almost cease to pity the undertakers and the medical men. Much, however, remains to be done. The death-rate of the entire area gives little or no indication of the salubrity or otherwise of its various parts. In Dr. Tatham's recently issued report on the health of Manchester for the years 1891 to 1893, inclusive, the variation in the incidence of mortality is strikingly shown, for while Moston, one of the out-lying districts, has a corrected death-rate for the three years of 16·84 per 1000, that for Ancoats is 36·92. But even this gives too fair a picture, for, as he says, "there are considerable areas in the City of Manchester where the conditions of life are so unsatisfactory that the people die there at the average rate of 52, 56, and even 58 per 1000." But the deplorable waste of human life still going on amongst us tells most heavily on the young, and infantile mortality—i.e., "the proportion of deaths under one year of age to 1000 births"—is very great. The average for the three years varied much in the different districts, ranging from 164 in the northern division to 222 in the old township of Manchester. This mortality, however, is nearly doubled among those poor waifs born out of wedlock, of whom 411 per 1000 in the whole city perished, and in South Manchester the rate was 437. It seems almost a mockery to talk of progress in the face of such figures as these; and they abundantly prove that there must be no standing still—that the warfare against ignorance, crime, and disease must be waged with unflagging, persistent energy.

When we ask how this fight is to be fought it is well to consider the conditions necessary for healthy life. At first sight these seem simple enough, and apparently easy of attainment. We want pure air, pure water, shelter, food and clothing, and we must be temperate in all things. The first comes to us as a free gift, bestowed with lavish hand, but from birth to death we spend our time in vitiating it. In exchange for every breath we draw, gaseous and animal matters more or less deadly are given back, and if the air were still and gases not diffusible we should soon die by involuntary self-murder. Hence the need for efficient ventilation. But few applications of physical science to practice are so unsatisfactory as the various methods of ventilation. Many of them seem to consist chiefly of contrivances intended to thwart Nature's laws, rather than to obtain the end in view by soliciting her aid. Much remains to be done for sanitation in the future by the application of more perfect science, combined with a little additional common sense, to the needs of everyday life. For example, the air-supply must not be obtained from the drains and sewers, as is too often the case. It has been known to occur even in a municipal palace like this. Most of those present will remember the painful tension in which the feelings and sympathies of the nation were held while the life of the Prince of Wales seemed flickering to extinction from illness thus produced. Nor when the source is pure must the current of air be too rapid, though often enough the current itself is blamed, when the mischief is done by that which it carries with it. No colds were caught last winter on the summit of Ben Nevis. Nor are they taken by those sleeping under the open sky in the prairies of the great North-west, even though the thermometer may be far below zero; but when the comfortable dwelling charged with impure air is reached the chances of escape are few. But in addition to the impurities of the air caused by animal life, there are the thousand-and-one modes of polluting it with trade products. Offensive trades should be carried on with all needful precautions; and if the chemical manufacturers, whose knowledge and ability we all admire, would only exercise a small portion of their fertility of resource in lessening the nuisances they create—nuisances almost more wonderful than the legitimate results of their efforts—they would bring about a happy change in many poor poisoned districts. But a glance at the programme shows that this and kindred topics will be dealt with by gentlemen far more able to do so than I can pretend to be. Of equal importance is an abundance of pure water. Until 1851 a very inferior and inadequate supply was obtained from pumps, wells, rain-water cisterns, some small works on the Medlock and at Gorton, supplemented by water from the Manchester and Stockport Canal and a well in the new red-sandstone. But in that year an abundant supply was obtained from the Longdendale Valley. Still the city grew and grew and its wants increased, so that in 1868 Mr. Bateman, the engineer, stated that the supply would only last a few years. Various schemes for obtaining more were suggested, and in the end the great Thirlmere undertaking was determined on. Terrible was the outcry against the Vandalism and vulgarity of disturbing the beautiful lake—loudest, perhaps, among those who had never been there; but the works went on for eight or nine years, and before they were completed Manchester was more than once or twice dangerously near a water famine. On Oct. 13th last the Thirlmere water was publicly turned on in the adjoining square. And if any of you will visit the lake you will find it still a thing of beauty—changed, no doubt; it is larger and fuller, looking, some may think, more noble than before, although ministering to the needs of hundreds of thousands of our fellow men. In the prosecution of this great enterprise no one rendered such invaluable aid as Sir John Harwood, who has been chairman of the waterworks committee since 1886. We have now an abundant supply for food, cleansing, and manufacturing purposes, as well as for watering the streets and cleansing the courts and alleys.

The housing of the working classes is so vast a question that I must barely touch on it. Two "unhealthy areas" have been cleared of the wretched hovels that crowded the surface and the property purchased by the corporation. It was hoped that private enterprise would have supplied the new dwellings required, but in the end the corporation had to build two large blocks of workmen's dwellings. They have been planned with great care so as to secure for each tenement good light, air, and ventilation. Each is several storeys high, and the one in Oldham-road is in the form of a hollow square enclosing an open space of an acre in extent. This plan of building seems almost unavoidable in towns from the high price of land. But I am not enamoured of these huge barrack-like buildings, where people live one above another, tier above tier, to the height of five or six storeys. Think of the toilsome journeys up and down the lofty stairs, where almost everything has to be carried; of the mothers with their babies in their arms; of what an expedition it must be for the little child down to the earth and the open air when walking is a recently-acquired art. Though separation and privacy may be obtained there must be an absence of many humanising influences. It is true that window gardening may be attempted on a small scale, but there is no little plot of ground to be cultivated in spare hours, and no return in vegetables, fruit, and flowers which does so much to ameliorate the lot of the labourer in many country districts. As a question of municipal politics, the advisability of providing dwellings and letting them at a rent which will not pay is one open to discussion. The ratepayers as a whole are taxed for the comfort and benefit of a few able-bodied citizens who have no apparent claim to such relief. As a question of public health

however, there is no doubt that they are a great improvement on the filthy, insanitary property they have superseded. May we indulge the hope that at some time in the future moving from place to place will be so easy and so cheap that the working classes will be able and wishful to live in country suburbs.

For food and clothing we are dependent on the world beyond "the silver streak." So long as our supplies come regularly we may eat, drink, and be merry. Many no doubt regret the time when we were independent of others for our daily bread, but that time has gone by, and we only hope that our supplies may never be stopped. To keep us absolutely safe with regard to this essential of our existence is, of course, the duty of every Government in power. Sanitation is not a matter affecting us only in the mass; it concerns the family and the individual, but among the majority of adults true ideas and earnestness in regard to health and life seem to permeate slowly. Great attention is now paid to the education of all, and it is to the children who will soon take our places that we must look for carrying on the work. Some there are who are a little doubtful whether, as commonly conducted, the term "education" is quite the correct one to use, and would prefer to speak of "schooling." Be this as it may, the teaching should prepare them for the citizenship which is their lot, and no better lessons can be given than such as will enable them to understand, and will help them to practise, the simple laws of health individually, and lead them on to see and to feel the duty as to matters of health that they owe to the community at large. When may we look for clear skies and pure air? When will polluted streams cease to be open sewers? If all worked together for good we might perhaps dream of a time when each one would do his duty to himself and his neighbour; when the jerry builder would cease from troubling; when the bricksetter, the joiner, and the plumber would do good, honest, well-planned work; when cleanliness and sobriety would be universal; when disease would be lessened and kept more under control, and in a good old age, in the fulness of time, life would silently ebb away like the gently receding tide. But the "ideal future" must be left for Sir Benjamin Ward Richardson to portray in the picturesque language of which he is so great a master, and we must strive, each one of us, as talents and opportunities serve, to improve the present.

A Post-Graduate Lecture

ON

SOME CASES ILLUSTRATING THE SURGERY OF THE CHEST.

Delivered during the West London Hospital Post-Graduate Course on Jan. 6th, 1895,

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GENTLEMEN,—With regard to the troubles that may follow simple fracture of the ribs, Dr. West[1] has pointed out that fracture of the ribs is followed much more often by emphysema than by pneumothorax. This he explains by the principle of cohesion. The visceral and the parietal layers of the pleura are two moist smooth membranes, coherent everywhere; if the lung be wounded by a fractured rib driven inward, the close cohesion between the visceral and the parietal layers of the pleura prevents the diffusion of air into the pleural cavity, and thus it is driven into the subcutaneous tissue. Still, there are plenty of recorded cases of pneumothorax after fractured ribs. In one of my cases air, blood, and pus were all present in the pleural cavity. The patient, aged twenty-four, was run over, and was admitted to the West London Hospital at once, with fracture of the tenth and eleventh ribs on the right side far back; she was spitting blood, and loud râles were heard over the right side of the chest. With careful nursing she did well for a week; the splitting of blood ceased, and she was allowed to sit up in bed; but on the eighth day she was weak and ill, and had more pain in her side; the temperature was 102° F. and the respirations 50. There were signs of pneumothorax in the front of the chest; behind there were signs of a collection of fluid. On the thirteenth day an aspirator was put in at the fifth space, near the angle of the scapula, and eight ounces of dark fluid blood were drawn off. This gave her great relief; but on the nineteenth day it was necessary again to use the aspirator, and this time the blood that was drawn off was mixed with offensive pus. A week later I made a free incision, letting out six or seven ounces of thin, brown, turbid, offensive fluid, mixed with gas, and put in a large tube. No more fluid came out during the operation, but a few hours later there was a profuse rush of it, soaking the bed. She did well after this; the tube was left out on the seventh day. I delayed making the incision in this case because, in spite of the presence of offensive pus in the chest, she was daily gaining ground in her general health, and I was anxious not to run the risk of causing fresh hæmoptysis by giving her an anæsthetic, or of reducing her strength by any operation till it was absolutely necessary.

Acute pneumonia or broncho-pneumonia after fracture of the ribs may be due to other causes besides injury of the lung: such as the shock of the accident, the exposure after it, the sudden enforced rest in bed, the impairment of the movements of respiration, and the difficulty of clearing the bronchi by coughing. A woman aged fifty was run over and admitted under my care with fracture of the third, fourth, and fifth ribs, and laceration of the vagina. Bronchitis was marked on the third day. Two days later there was pneumonia on the same side as the fractures; she lay on the injured side, and hardly moved it in respiration; the whole lung was rapidly involved, her breathing became laboured, and she sank and died on the tenth day. Another case was that of a man aged thirty-nine, who fell out of a cart. He had severe concussion, fracture of several ribs on the right side, other slight injuries, and chronic bronchitis. On the third day he had acute pneumonia, the temperature being 103° F., the breathing laboured, and the face dusky. That night he was bled to ten ounces with immediate relief; he began at once to improve and made a good recovery. Leeches had failed to do him any good, and I feel sure he owed his life to the bleeding. In a case of hæmothorax after fractured ribs bleeding gave relief, though it did not save the patient's life. A man aged forty-five was crushed in a carriage accident; his ribs were fractured, and he sustained a bad compound fracture of the leg. On the third day his pulse and respiration rose to such a height that he was bled to nine ounces. He was greatly relieved and got some sleep, but the relief was only temporary and on the fifth day he died. We found no less than thirteen ribs fractured, seven on one side, six on the other; the right lung was lacerated and there was blood in the right pleural cavity. Probably in such cases as these nothing gives so much relief or is so likely to save life as a moderate bleeding.

Passing from injuries of the ribs to diseases of the ribs, it is worth our while to note how seldom the ribs are the seat of tumours, either innocent or malignant. It is true that in the last stages of melanotic cancer the ribs may become infiltrated with the disease; but with this exception the ribs are rarely attacked by malignant disease, either primary or secondary—not even in cases of advanced cancer of the breast. It is the medulla of the bones that receives the secondary deposits of malignant disease, and perhaps the ribs owe their immunity to their having so little medullary tissue. But, beside this, the distribution of secondary growths in malignant disease is not a mere matter of chance; some parts of the body are much more apt than other parts to receive and nourish the cancer cells that are carried to them by the blood. I once tabulated the distribution of the secondary growths in many hundreds of cases of cancer of the breast,[2] and it is certain that some bones, especially the upper third of the shaft of the femur, are more favourable for secondary deposits than other bones are; the cancer cells may be carried all over the body, but they do not find a congenial soil everywhere.

The diseases of the ribs, then, are mostly diseases of inflammation—periostitis, caries, and necrosis; and most of the patients are tuberculous or syphilitic. As an instance of tuberculous caries a little boy came under my care with a chronic abscess over the lower ribs on the left side in the mid-axillary line. It was incised and

[1] Bradshawe Lecture on Pneumothorax, 1887.

[2] THE LANCET, March 23rd, 1889.

drained, and it healed well; but two months later he came back with caries of the lumbar spine, and where the abscess over the ribs had been there was now a deep depression of the wall of the chest one and a half or two inches in diameter. There is another cause of caries of the ribs besides tubercle and syphilis; it may occur after one of the continued fevers, especially typhoid fever. A man forty years old had typhoid fever in the spring of 1891, and this was followed by periostitis of both tibiæ and of one of the lower left costal cartilages. As regards the nodes on the tibiæ, one became absorbed, and the other suppurated and healed without exfoliation. The swelling of the costal cartilage suppurated and was incised, but did not heal; and in December, 1892, he had a sinus there three and a half inches long. I cut down and opened it at its lowest point, and scraped a carious patch on one of the costal cartilages, but still it did not heal. In November, 1893, I laid open the whole sinus and found a small, deep, thick-walled cavity, leading to a costal cartilage which was cut right across by caries. I removed the carious ends of the cartilage and the thickened tissues round the sinus, and kept open the greater part of the cavity; but fresh sinuses formed, and these also had to be laid open, and then at last the whole wound healed. Keen[3] of Philadelphia collected 69 cases of diseases of bone following one or other of the continued fevers; the large majority were cases of typhoid fever; most of them were those of men; and his list includes almost all the bones in the body. In 22 cases the bones of the head or the face were attacked, in 7 the trunk, in 6 the upper limbs, and in 42 the lower limbs. Necrosis occurred in 50 cases, caries in 12. As regards the interval between the onset of the fever and the onset of the bone disease, in 10 cases it was a fortnight; in 27 it was from three to six weeks; and in 10 cases was more than six weeks. Caries or necrosis of part of a rib, whatever its cause, is so likely to set up sinuses burrowing in all directions, even down the whole length of the abdominal wall, that we are justified in operating on these cases, but the operation must not be done in a half-hearted way; the bone must be scraped or excised, and every sinus must be carefully laid open to the very end.

As regards pleural effusions I should like to mention a case of serous effusion due to cancer of the pleura secondary to cancer of the breast, as it has some points of practical interest. I removed the right breast in March, 1890, and removed a recurrent nodule in November of the same year. In April, 1891, the patient had signs of right pleural effusion; and it is worth noting how quickly the fluid was poured out. On the first occasion I drew off forty-three ounces; ten days later fifty-three ounces; eleven days later thirty ounces; a week later fifty ounces; and eight days later forty-three ounces. Three days later her sufferings came to an end; they had been much relieved by the use of the aspirator, and it was curious to see how she fell asleep after it, just as patients do after tracheotomy. I have seen the same sudden sleep on two or three occasions in a case where I had several times to puncture the abdomen for acute distension—the so-called idiopathic dilatation of the colon.[4] And another case of non-purulent effusion is worth mentioning here, though I only know of it by hearsay. A young man aged nineteen after some trifling ailment was found to have some enlarged glands in the left axilla. A surgeon in Paris operated on him, making a transverse cut right across the axilla from the pectoral muscle almost as far as the trapezius, and clearing out the glands; after this he used to put his finger into the wound day after day and clear out whatever he could. The young man's blood was examined, and he was declared to have leucocythæmia. Then some obstruction of the lymphatics of the arm set in, and his arm began to exude lymph, to the extent of several ounces daily. The axillary wound was full of indolent granulations; the arm was blistered with vesicles containing lymph; then came signs of pleural effusion on that side of the chest, and the fluid that was drawn off had large flakes of lymph floating in it, and coagulated rapidly to a firm clot. He wasted rapidly, probably from some obstruction of the thoracic duct, and so died.

For exploring the chest a small syringe with a long strong steel needle is better than an aspirator—easier for the surgeon, less alarming to the patient, and less likely to wound the lung; cocaine will do for an anæsthetic provided it be injected under the skin, not painted over it. Of course, one must avoid the intercostal vessels, and the needle must not be thrust through any thick muscle. In one case, an empyema of the right side containing sixty-five ounces, a surgeon had put the needle of the aspirator through the whole thickness of the pectoral muscle; this was followed by an abscess beneath the muscle communicating with the empyema.

If the empyema is already pointing outside the ribs we must of course make a free incision into the swelling, but it does not follow that we shall be able to make out the communication between the swelling outside the ribs and the empyema inside them. I have had three cases of empyema pointing outside the ribs. In one, that of a boy aged nine, an empyema of the left side had already burst through the skin, leaving a fistula, high up, between the second and third ribs, close to the sternum. When one pressed the chest, pus poured from the fistula, but one could not get a probe through it. In another case, that of a young man, an empyema of the right side had pointed over the seventh, eighth, and ninth ribs in the anterior axillary line, and had been mistaken for a simple superficial abscess. I opened it freely, but could not make my way from it into the chest. In the third case, that of a man aged forty-eight, the empyema pointed at the same place, and here, on opening the swelling, I did come straight on a large hole between the ribs into the chest. Thus, in two cases out of three, the place where the empyema pointed was no guide as to the place where one ought to evacuate it. In many cases, of course, one cannot do better than follow the track of the exploring syringe. But it happens to every surgeon now and again to make his opening too high or too far forward for proper drainage of the cavity, and if he does this he had better make his counter-opening at once, or he will certainly have to make it afterwards. As regards the resection of part of a rib, this can hardly be avoided in children; but in adult patients the ribs may be far enough apart to admit a full-sized tube. In one of my cases there were no less than 105 oz. of pus, mixed with large masses of fibrin; but it was all let out by simple incision without resection, and the cavity was healed in a few days. Still, it is a very simple matter to remove an inch of a rib, and it allows the surgeon to examine the cavity with his finger. If the pleura be much thickened it is better to open it with a scalpel than with a director.

There remain for our consideration some important points as to the course, treatment, and termination of cases of empyema.

Empyema may be due to the extension of suppuration downward from the neck or upward from the abdomen, and it may itself extend downward in various directions. Some time ago a child came under my care with a mastoid abscess. This was opened and drained; then came a deep abscess in the neck, which was also opened; then came empyema—all being on the same side. Bouchut[5] has recorded the case of a girl in whom an empyema of the left side of the chest was due to a long sinus on the left side of the face from caries of the malar bone, and Sir W. Dalby had a case where pus burrowed downwards from the mastoid bone, along the sterno-mastoid, to the lower border of the thyroid cartilage, and also under the splenius and complexus muscles. As regards the downward wandering of empyema, a man aged forty after acute double pneumonia had empyema of the left side. This was opened and drained, and about three weeks afterwards I allowed him to get up; but that very day his temperature began to rise and fluctuate, and he began to lose ground; a few days later, he had pain down the leg, and kept it flexed; then came an acute swelling in Scarpa's triangle, and here I opened a large abscess passing up into the pelvis out of reach of my finger, and also burrowing backward in the thigh, round the inner aspect of the femur, so that a counter-opening had to be made between the hamstring muscles, and then it all healed without any more trouble. A very good collection of cases of this wandering sort of empyema has been published by Bouveret.[6] Some went into the lumbar region, and one of these pulsated like an aneurysm; others went into the gluteal region; others made their way to the umbilicus. Bouveret points out that

[3] Toner Lecture, Smithsonian Miscellaneous Collections, vol. xv., 1878. See also St. Bartholomew's Hospital Reports, 1881, p. 107; 1885, p. 107; and 1887, p. 210; also Stanley, Diseases of Bones, 1849, p. 131, and Sir James Paget's Clinical Lectures and Essays.

[4] Ogle: Relief of Tympanites by Puncture, 1888.

[5] Gazette des Hôpitaux, May 15th, 1877.

[6] Lyon Médical, July, 1882. See also Owen Rees, Brit. Med. Jour., August, 1858; Foot, Dublin Medical Journal, 1873; and Chappet, Dictionnaire de Médecine et de Chirurgie Pratique, article "Ombilic."

this extension of empyema occurs almost always on the left side, and in young people.

As to the after-treatment of empyema, probably we are all agreed that it ought not to be washed out at the time of operation; it cannot be safe to do it while the patient is anæsthetised, so that he cannot tell the surgeon anything, or expel the lotion by coughing. After the first two or three days I usually wash out the cavity once a day; one often finds shreds of lymph and small clots of blood which are doing no good inside it. Of course the lotion must not contain any poisonous substance; and of course it must be of a proper temperature. I know a case where cold lotion was used for washing out a child's chest, and the child died at once. In 1877 Dr. Cayley[7] published the case of a man aged thirty-six who had repeatedly had an empyema washed out; but one day the washing out was at once followed by convulsions, opisthotonos, and death in sixteen hours. Vallin had a case, that of a man aged twenty-three, where washing out an empyema was followed by convulsions and opisthotonos; death ensued in six hours. Raynaud had a similar case, but the patient recovered. Lorey had a case, that of a man aged twenty-seven; his empyema had been washed out daily for three weeks, and then one morning the washing out was followed by syncope and convulsions; these passed off, and he repeated the washing out that evening; again there was syncope, and again convulsions, and this time the patient died in a few hours. These cases remain unexplained. In all of them the washing had been done day after day, week after week, and nothing had happened. No cerebral embolism or thrombosis was found; none of the post-mortem examinations showed anything special. Dr. Cayley, in his account of the whole subject, can find no definite explanation of it.[8] The only trouble I have had in washing out was in a young man whose empyema I had washed out daily for a week; one day later I washed rather too hard, and suddenly he had a fit of coughing, a sharp pain in his side, a foul taste in his mouth, and he coughed up a streak of blood, and for some hours he felt very weak and low: no harm came of it—I must have torn some adhesion.

From time to time cases are recorded where the drainage-tube has fallen into the cavity or has been sucked into it. This stupid accident has twice happened to patients under my care. I have collected all the recorded cases I can find, and they make one thing clear—that the tube must not be left there. In both my cases I was able to find it very easily with long, slender urethral forceps, which can pass down a very narrow sinus and then open very wide, so that the whole cavity can easily be explored. The tube generally falls to the back of the cavity and lies alongside of the spine, but if there are adhesions or bands of scar tissue round the opening into the cavity it may get caught among these close to the ribs.

I have to refer to a very unhappy case where the patient suddenly died on being turned on his side for operation. A boy ten years old was admitted with dulness over the whole left side, and marked bulging of the chest wall. Chloroform was given, and he was turned partly over on to the sound side without any bad result. After waiting a little I turned him over a little further and made my incision. At this moment he stopped breathing, but the pulse continued, and the anæsthetist did not at once notify the cessation of the breathing. Then the pulse stopped, and neither by letting out the pus nor by artificial respiration were we able to save his life. No post-mortem examination was allowed. This disaster would probably not have happened if I had first aspirated the chest without taking the boy out of bed at all, or if, as would have been quite easy, I had drawn him just over the edge of the operating table and had then knelt underneath him, and so let out the pus without turning him over.

In two cases empyema was combined with or followed by tuberculous phthisis. In March, 1894, I operated on a young man aged twenty-three for an empyema of the right side containing about two ounces and a half of sero-purulent fluid, and for the next three weeks he did very well, save only that his temperature remained high at nights. As this did not improve I made a counter-opening lower down and further back, but still the cavity did not close. Then he went home into country air, but still he did not heal; and about three months after he went home he was found to have signs of pulmonary phthisis. In another case, which is now in the hospital, the empyema healed quickly; but there are signs of commencing phthisis of both apices, which were not present when the patient was admitted a month ago.

There is a form of empyema where the pus is intensely fetid, of a horrible gangrenous smell — thin blackish fluid so virulent as to cause sloughing of the muscles all round the wound, with delirium, sweating, diarrhœa, rigors, and great prostration. In one case, that of a man aged twenty-five, I let out more than a pint of thin, blackish, horribly gangrenous fluid. I kept the cavity clean with frequent irrigation, but there was extensive sloughing of the intercostal and trapezius muscles; he never rallied from the state in which he had been since admission, and he died on the tenth day after admission. In another case, that of a woman aged twenty-four, we let out thirty ounces of similar thin, dark, gangrenous fluid. She lay for nearly a fortnight in the same typhoidal state as the first patient, delirious at times, passing everything under her and refusing food; there were the same sweats and diarrhœa and the same sloughing of the muscles round the wound. At last she began to improve, and recovered. There was no evidence in either case during their illness, or in the first case at the post-mortem examination, of gangrene of the lung—no fetid sputa, no shreds of lung tissue in the discharge, and no free air in the pleura.

As regards gangrene of the lung I had an instrument made some years ago with the idea that it might be useful for the evacuation and drainage of deep cavities in the lung, the liver, or the brain. In such cases the pleasure of finding pus is often marred by the difficulty of getting a tube into the cavity without lacerating the surrounding tissues; nor is it easy to be sure that the tube is just the right length. The instrument is a director 7 in. long, cylindrical, the same size all the way, deeply hollowed out, marked in half inches all the way, and cut off short without any handle, so that a tube can be slipped down over it. Four silvered tubes fit smoothly over it, and they are exactly 1½, 2, 2½, and 3 in. long. There is a collar to fit any of the tubes, with holes in it for threads to keep it steady. When you find pus with this director you know to half an inch how deep it lies; then you take a tube, or a bit of drainage-tube, of exactly the right length, and slip it down over the director. Thus you avoid the chance of missing your way or of damaging the tissues with that clumsy and unclean instrument, the polypus forceps.

[7] Transactions of the Clinical Society, 1877, p. 16.

[8] Some curious cases are reported by Lépine (Union Médicale, Feb. 1st, 1876) where the evacuation of an empyema or the subsequent irrigation of the cavity was followed by slight temporary loss of power in the upper or the lower limb on that side.

CASES OF INTESTINAL ANASTOMOSIS BY MEANS OF THE MURPHY BUTTON.

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THE following cases, for the notes of which I am indebted to my late house surgeon, Mr. A. L. Jackson, exemplify some of the uses of the Murphy button in abdominal surgery.

CASE 1. *Carcinoma of the pylorus; gastro-enterostomy.*—A single woman aged fifty-five years was admitted into St. Mary's Hospital on Nov. 13th, 1894, with symptoms indicating obstruction at the pyloric orifice of the stomach. She had for six months previously been unable to retain any solid food in the stomach, but was constantly sick after her meals; she had on several occasions vomited blood, and had been reduced to a condition of extreme weakness and emaciation, her weight, which had been over 9 st. before the commencement of these symptoms, having fallen to 7 st. 2 lb. She had been operated on ten years previously for exomphalos, and the umbilical region was still occupied by a hernial protrusion of considerable size. Somewhat below the normal situation of the pylorus a hard, nodular, and mobile swelling could be detected, and the area of stomach resonance was greatly increased. The diagnosis of carcinoma of the pylorus was made, and it was decided to perform gastro-enterostomy, and if possible pylorectomy. On Nov. 20th the abdomen was opened in the middle line in the epigastric and umbilical regions, and the dilated stomach was at once perceived; on

tracing this to the right a hard nodular growth was found implicating the pylorus and the commencement of the duodenum, but adhesions of its posterior surface to subjacent parts rendered impracticable any attempt at pylorectomy. I was, therefore, compelled to content myself with gastro-enterostomy, in the execution of which some difficulty was encountered owing to the numerous adhesions which existed between the great omentum and peritoneal folds in its vicinity. After some delay the small intestine was exposed and followed up to the commencement of the jejunum, into which the male half of a large-sized Murphy's button was introduced; the female segment having been inserted into the lower part of the great curvature of the stomach, the two portions of bowel were accurately approximated. The subsequent course of the case was uneventful; the patient was able to assimilate the ordinary hospital diet within a month from the operation, and on Dec. 25th was able to enjoy the traditional Christmas dishes. She left the hospital on Jan. 12th, her weight being then 8 st. 11 lb. At the present time (April 23th) her condition is eminently satisfactory, the growth seems to be quiescent, and her weight is 10 st. 6½ lb., being an increase of 3 st. 4½ lb. since the operation; the button, however, is still retained, it being now 160 days since its insertion; the only evidence of its presence is an occasional pricking sensation in the epigastric region.

CASE 2. *Strangulated inguinal hernia; gangrene of intestine; resection and anastomosis.*—A man aged fifty years was admitted to St Mary's Hospital on Jan. 29th, 1895, suffering from a strangulated inguinal hernia of four days' duration, which four days had been spent in aggravating his condition by means of drastic purgatives and irritating local applications. When summoned to see him I decided upon immediate operation and accordingly cut down upon the large scrotal swelling which was present on the right side; the sac was found to contain a quantity of fetid fluid of brown colour, and the bowel for about two inches in length was black and gangrenous, and in a condition which allowed no hope of its recuperation. The intestine was clamped and five inches of it were resected together with a wedge-shaped piece of mesentery; the divided ends were then brought into contact by means of the medium-sized Murphy button, and the edges of the mesentery approximated by sutures. As the patient was somewhat exhausted it was not considered advisable to attempt the removal of the large hernial sac, but it was rendered as far as possible aseptic by applications of a 1 in 20 carbolic lotion, and subsequently a large drainage-tube was introduced. A few days after the operation the patient had an attack of delirium tremens and had to be kept under the influence of morphia; the operation wound also became septic and discharged a considerable quantity of very offensive pus; further than this a troublesome diarrhœa supervened, and it was only with difficulty that the patient's strength was sustained. Ultimately, however, he rose superior to all these complications and on Feb. 12th was able to take solid food; on Feb. 17th he complained of uneasiness in the rectum, and on examination the button was felt and was without difficulty removed, nineteen days having elapsed since its introduction; after this convalescence was uninterrupted. I have since learnt that this patient is in perfect health; his bowels act well and freely, and he feels as well as he did before the operation.

CASE 3. *Strangulated femoral hernia; perforation of intestine; enterectomy and anastomosis.*—A female aged sixty-two years was admitted to St. Mary's Hospital on the evening of Feb. 25th, 1895, suffering from a strangulated femoral hernia of seven days' duration. Throughout this period opium had been administered and taxis had been several times tried with no result, and stercoraceous vomiting occurred shortly after her admission. The patient having been prepared for operation I cut into the hernial sac, and there discovered a loop of bowel three inches in length in an acutely strangulated condition. On incising the neck of the sac and drawing down the bowel for a more minute inspection a small perforation was detected at the proximal end of the portion involved. A resection to the extent of seven inches was then effected, and the divided ends were brought together by means of the medium-sized Murphy button. Some difficulty was experienced in securing the vessels at the apex of the wedge-shaped portion of the mesentery which had been removed, and after the bowel had been returned into the abdominal cavity there was considerable oozing therefrom; the loop was, therefore, again drawn out, and a bleeding point which had hitherto escaped notice was ligatured; the peritoneal cavity was thoroughly cleansed by the introduction of sponges on holders. The patient's rallying powers were insufficient to tide her over the shock resulting from the somewhat protracted operation, and she succumbed thirty hours afterwards. At the necropsy the divided ends of the intestine were found to be in perfect approximation, and some adhesion between the opposed serous surfaces had already taken place; there was no sign of peritonitis, and death could only be attributed to shock.

Remarks.—A perusal of Professor J. B. Murphy's paper in THE LANCET of April 27th prompts me to put on record my at present limited experience of the ingenious contrivance which bears his name and which seems destined to effect a revolution in intestinal surgery. In the list which he has compiled Professor Murphy has included very few cases recorded in this country, and it may be a source of gratification to him to find that his method has met with a far wider recognition among English surgeons than he has hitherto imagined. In proof of this statement I may point out that Mitchell Banks has recorded two cases of enterectomy, of which one was successful;[1] Hamilton[2] and C. A. Morton[3] successful cases of enterectomy; while E. Owen, in THE LANCET of April 27th, describes a case of resection of the intestine for cancer of the colon, and Arbuthnot Lane[4] describes a pylorectomy and gastro-enterostomy in which (I learn from him) the patient succumbed six days after the operation to the disease, advanced carcinoma of the pylorus. In a previous communication[5] Professor Murphy has drawn attention to the remarkable reduction in the mortality following enterectomy and kindred operations when performed with his button, and this reduction is rendered even more conspicuous in the light of the cases tabulated in his later contribution. A not unnatural reluctance to publish failures exists in every occupation in life, and surgeons are not altogether exempt from it; but even if all the unrecorded cases where the Murphy button had been used without success could be collected it is doubtful whether they would exceed the unsuccessful cases resulting from other methods, which had in like manner not been deemed worthy of publication. Further, the reduced mortality in intestinal operations with Murphy's button is so remarkable that even if a considerable number of fatal cases was added to the list it would still compare favourably with other methods. Take, for instance, the mortality following resection of the bowel for gangrenous hernia—there are in Murphy's list fourteen cases and two deaths, to which may be added my cases, which will give a total of sixteen cases and three deaths, or a mortality rather under 19 per cent.; and here the element of personal skill may be entirely excluded, for the sixteen cases were in the hands of eleven different operators. The statistics of Zeidler of St. Petersburg[6] show a mortality of 49 per cent. in 289 cases of primary resection of gangrenous hernia; even if we take into consideration the fact that these figures refer to a far larger number of cases the disproportion between 19 per cent. and 49 per cent. could hardly be accounted for by the difference in the number of cases tabulated. Retention of the button has been known to occur, though I find no mention of it in Professor Murphy's tables; he, however, in his answer to Dr. Wiggin's criticisms[7] mentions that two such cases had been reported to him. In my case of gastro-enterostomy the button has been retained for 160 days, and the intestinal tract has up till now shown no resentment at its presence. I have not followed Professor Murphy's advice to explore the rectum in the hope of discovering it, for I imagine it has found its way into the disused portion of the duodenum, and so the occasional "pricking sensation" which the patient experiences in the epigastric region may be accounted for; whatever the situation, it is not productive of any signs of irritation, and its retention has been in no way prejudicial to the successful issue of the case. My second case is noteworthy on account of its numerous complications—viz., delirium tremens, severe diarrhœa, and sepsis. The latter was, I believe, unavoidable, for the patient was not in a condition to permit of the prolonged dissection necessary for the removal of a large hernial sac, and had I attempted this the issue of the case might have been different. I decided

[1] Brit. Med. Jour., Feb. 23rd, 1895. [2] Ibid.
[3] Ibid., April 20th, 1895.
[4] Medical Press, Aug. 29th, 1894.
[5] THE LANCET, Sept. 15th, 1894.
[6] Centralblatt für Chirurgie, 1893, p. 62.
[7] New York Medical Journal, Dec. 1st, 1894.

to leave an extensive source of sepsis in the shape of a sac which had contained gangrenous bowel in preference to prolonging an operation on a not very promising subject, and I trusted that I might counteract this element of danger by subsequent treatment, and in my humble opinion the result of the case justified the course I pursued. The death of my third and last patient was a source of great disappointment to me, but as far as the button was concerned no blame can possibly be attached to it, for it was proved to have answered its purpose perfectly. As will happen on certain occasions, everything seemed to conspire against a favourable issue: a delay of seven days from the commencement of symptoms of strangulation may justly be instanced as an example of "criminal procrastination," and the administration of opium during that period was an aggravation of the offence, while the difficulty in controlling the hæmorrhage from the mesenteric vessels was the proverbial last straw.

Queen Anne-street, W.

A CASE OF SCLEREMA NEONATORUM ENDING IN RECOVERY.[1]

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SCLEREMA NEONATORUM is so rare a disease, and when met with so seldom has any but a fatal ending, that I venture to publish a case which has been recently under my care and which ended in complete recovery, believing that in the present incomplete state of our knowledge of this and allied conditions the period has not yet arrived when such records are superfluous.

The patient, a male infant aged five weeks, was brought to the out-patient department of the Hospital for Sick Children at Great Ormond-street on Nov. 5th, 1894. The mother, a healthy-looking woman, stated that this was her third child. Of the other two the elder was strong and well, but the second died in consequence of a fall at the time of its birth. The last pregnancy was preceded by a miscarriage at the third month. The father was said to be healthy. The family occupies three rooms on a first floor and no history of privation was obtained. The infant was born at full term, the head presented, and there was no particular difficulty at the birth except that the hæmorrhage was somewhat excessive. He was a well-nourished and, except in one respect, a healthy child. There was not, and had not been, any rash upon the buttocks or snuffles. The child was being suckled by his mother, who had an abundant supply of milk, which he took regularly and well. The back of the infant presented a remarkable induration, which extended, like a kind of carapace, over almost the entire dorsal aspect of the body, involving the deltoid regions and upper arms, the buttocks, and the thighs down to and including the popliteal spaces. The skin of the face, front of the trunk, and limbs was perfectly soft and natural. The edges of the indurated area were sharply defined, irregular, and maplike, and there was nowhere any tendency for the hardened to merge into the healthy parts. The skin over the affected parts was stretched, but not shiny, and in places exhibited a pink mottling; it could not be pinched up between the fingers; pressure produced no pitting, but merely rendered the surface pale for a time. The distribution of the induration was remarkably symmetrical. The legs could not be fully extended either at the hips or knees, and when extension was attempted the skin in the popliteal spaces became very tense and shiny. There was no swelling, œdematous or other, of the hands or feet. The child was good-tempered, and the examination did not appear to cause it any pain or discomfort. There were no signs of any disease of the heart, lungs, or other viscera, and there was no intestinal disturbance. The urine was not examined. It was stated that the induration upon the buttocks was noticed immediately after birth, and the places were at first of a deep pink colour. During the first nine days of life the hardness spread down the thighs, but as far as could be ascertained the extension to the back and arms only took place during the fifth week, just before the infant was brought to the hospital, by which time the colour of the affected parts had become much paler than formerly. No history of any surface exposure to cold air or water could be obtained. Inunction of a drachm of cod-liver oil night and morning was prescribed. The note of Nov. 12th, a week later, states that the induration in the dorsal and lumbar regions was rather less marked, but there was no noticeable change in other parts, except that the redness had practically disappeared. The general health continued good, the infant sleeping and taking his food well. There was no coldness of the skin or extremities, and the temperature taken in the rectum was 98·2° F. On this date inunction of blue ointment was ordered in place of the cod-liver oil. By Nov. 19th there was decided improvement in the local condition. The skin of the back, although it appeared stiffer than that of the normal parts, no longer exhibited marked induration; the hardness in the deltoid regions had disappeared, but a small patch remained upon each upper arm. The hardness of the buttocks and backs of the thighs—i.e., of the parts first affected—was as distinct as ever, but had somewhat diminished in extent, and the hide-bound condition in the popliteal spaces was less marked. It was a noteworthy fact that as the induration cleared up it did not merely shrink at its borders, but isolated patches were left which had become detached from the main area. Moreover, no pitting could be elicited in the regions in which the affection was clearing up. The note of Nov. 26th says that by that date further improvement was evident. A very small patch of induration was noticed in the left parotid region, which had probably been previously overlooked. On Nov. 29th the rectal temperature was 99°, and the induration had still further diminished in extent. On Dec. 13th there were still isolated patches upon the upper arms and extensive induration over the buttocks. On this date the inunction of mercurial ointment was stopped, and that of cod-liver oil was ordered to be resumed. On Jan. 31st, 1895, there was only a small patch of induration upon the outer surface of each thigh and the child could extend its legs well. The arms and back were entirely free. By March 14th the induration had completely disappeared; there was a slight cough, but no abnormal signs were detected in the chest. The infant was good tempered, well nourished, and slept and took the breast well. On April 18th the child weighed fifteen pounds and three-quarters. The temperature in the rectum was 99·4°.

From the typical cases of sclerema neonatorum, upon which the descriptions contained in the text-books are mainly based, the above case presents certain well-marked differences, which, after all, are differences of degree rather than of kind, and which may be briefly summed up as follows: 1. The child, instead of being weakly at birth, was, with the exception of the local condition, in excellent health; nor had he suffered at any period of his brief existence from any pulmonary or intestinal disorder. 2. The temperature as taken in the rectum was at no time exceptionally low, whereas in severe cases the depression of temperature is one of the most conspicuous phenomena of the disease. The rectal temperature of 98·2° in the earlier stages probably indicated some depression, for it is stated that in young infants the temperature is as a rule over 99°, and on later dates the temperature was always somewhat higher in this case. 3. The induration after spreading in the earliest weeks of life became arrested, and instead of succumbing to the disease the patient made a steady and complete recovery. Now the only recognised condition with which sclerema is liable to be confused is the œdema sometimes observed in newly-born infants. There is no doubt that these two phenomena have frequently been confused together, and such confusion permeated the earlier literature of the subject until Parrot clearly differentiated between them, pointing out that Andry and other French authors had applied Underwood's name of sclerema to a quite different condition from that which he intended it to designate. Those who are interested in this question will find the differences between sclerema and œdema neonatorum clearly set out in Henoch's work on the diseases of children, and in a paper by Dr. Ballantyne.[2] In their general condition infants which are the subjects of sclerema and of œdema are apt to resemble each other somewhat closely, but the integuments of œdematous infants usually pit on pressure, although when there is great tension of fluid this character may be to a great extent wanting. Again, whereas sclerema tends to commence upon

[1] A paper read before the Medical Society of London on April 22nd, 1895.

[2] Brit. Med. Jour., vol. i. 1890, p. 463.

the dorsal aspect of the body and legs, and thence to spread to the remainder of the surface, œdema is apt to appear in the hands and feet and early involves the abdominal walls and scrotum or labia. I do not think that the case which I have described was one of œdema, for the following reasons: 1. There was no evidence of syphilitic taint in the child, and the history of a miscarriage preceding the pregnancy hardly suffices as evidence of this disease; nor was there any evidence of erysipelatous inflammation, of visceral lesions, nor, indeed, of any recognised cause of œdema. 2. The distribution of the hardness and the manner in which it cleared up, leaving isolated patches which persisted for a long time, seems to me strongly opposed to the diagnosis of œdema. 3. The absence of pitting on pressure even in parts in which the induration was disappearing, and the tension could no longer be excessive, seems incompatible with such a diagnosis. I should, however, mention that when the patient was shown at the Dermatological Society in November, 1894, some of those present expressed the opinion that the condition was rather of the nature of œdema than of sclerema. If I am in error in describing the case as one of sclerema I have erred in good company, for among the published cases of that disease I have found several recorded by eminent observers which were obviously of the same nature as that under consideration.

I may perhaps be permitted to refer briefly to some of these examples. In THE LANCET for 1889[3] Dr. Angel Money recorded the case of a female infant aged five weeks. At the time of birth a patch of induration was noticed on the right shoulder and another in the left parotid region. The skin was hardened all over the back of the trunk and on the buttocks and thighs, and in other parts was normal; no mention is made of the colour of the affected regions. The muscles were well developed, the spleen was palpable, but there was no other evidence of visceral disease. The rectal temperature was 99·2°. There was no evidence of syphilis. Up to this time the induration had been spreading, but afterwards steadily decreased, and six weeks later there only remained a small patch, about the size of a pea, in the left parotid region, and one of the size of a sixpenny piece in the left deltoid region. The child continued well and strong. Dr. Money was inclined to attribute the favourable result to the inunction of blue ointment. The resemblance of this case to mine is very striking, and is shown in the distribution of the affection, in the absence of pitting, in the manner of clearing up, leaving detached islets of induration, and in the absence of low body temperature or other signs of ill-health. Dr. Barlow records the case[4] of a feeble infant first seen nine days after birth. Over the greater part of the back, on the shoulders, and on one thigh the skin had a bluish-red colour, was raised above the surrounding level, and exhibited marked brawny induration. The surface was not hot, and no pitting was elicited on pressure. No glands were enlarged, and there were no signs of heart trouble or of atelectasis. Three days later the induration of the back had extended downwards, and there was some induration on the front of the right arm. A week later the child was brighter and better, but the induration was still spreading, and had involved the nates and backs of both thighs. Seventeen days later the induration was slowly clearing up, and the affected skin was paler. In the course of the following three months the sclerema disappeared entirely with the exception of one or two minute flattish indurations on the middle of the back. The treatment adopted was inunction of the affected parts with camphorated oil, and small doses of cod-liver oil by the mouth. Here the patient was seen at a considerably younger age, and the redness, which in my case had to a great extent disappeared by the time that the child came under observation, was a conspicuous phenomenon. Another example, in which a vividly red area of induration was confined to the buttocks and backs of the thighs of an infant a month old, was recorded by Dr. A. G. Barrs.[5] Grey powder was administered, and the infant recovered. A somewhat similar case will be found recorded by Dr. A. R. Robinson.[6] Evidently the case which I have described is one of a group of cases tending to recovery, all more or less closely resembling each other, and which, whilst they differ in certain respects from the typical examples of sclerema, exhibit still more conspicuous differences from the œdema of new-born infants as it ordinarily presents itself. Possibly when future research shall have thrown more light upon these obscure conditions it may turn out that such cases constitute a third distinct group differing in their essential nature from either of the conditions under discussion. Of the morbid anatomy of the condition present in such examples as these nothing is of course known, but we are not without knowledge of the changes present in fatal cases of sclerema. Some writers have described a deposit of stearin-like material in the subcutaneous tissue, suggesting that the fat there present has become solidified, and accordingly the name of fat sclerema has been employed. The theory of fat solidification received support from the observations of Langer,[7] who states that in young infants nearly all the fat in the body is concentrated into the panniculus adiposus, which is relatively nearly five times as thick as in adults. Langer found that when extracted from the adipose tissue the fat of infants did not completely melt below a temperature of nearly 40° C., so that the ordinary body temperature is not sufficient to keep it completely liquid. This much higher melting point of the fat of infants than of that of adults was found to be due to its containing a much larger proportion of stearin and palmatin, whilst the amount of olein was correspondingly less. There are, however, records of careful post-mortem observations of the skin and subcutaneous tissue of infants dying from sclerema which are not consistent with the above view, and which are equally difficult to reconcile with the clinical features and rapid recovery of such cases as have been quoted above. Thus Parrot[8] found that the most conspicuous changes were atrophy of the skin and of the subcutaneous fat, and that in consequence of this latter change the fibrous trabeculæ of the subcutaneous tissues appeared abnormally numerous and distinct. Ballantyne describes very similar appearances to those observed by Parrot, but he holds that the fibrous tissue increase is real and not merely apparent, and regards the atrophy of the fat cells as secondary to this sclerosis. Langer regarded the fall of the body temperature as the primary phenomenon and the solidification of the fat as the result of the cooling, but he suggests that in cases in which there is no conspicuous fall of temperature a similar result may be brought about by undue surface exposure to cold air or water. He quotes the observations of Sommer, who found that the natural temperature of new-born infants is somewhat higher than that of adults—viz., between 99·8° and 100° F. In cases in which there is a rise instead of the usual fall of temperature Langer ascribes the solidification of the fat to the oxidation and resorption of olein and a resulting elevation of the melting point. There is, however, another way in which we may look upon the relation of the lowered temperature to the sclerema. A conspicuous fall of temperature and early death are the phenomena observed in animals which have been varnished, and it seems at least possible that when the sclerema is universal or very extensive this affection interferes with the cutaneous functions, or more probably with the vaso-motor mechanism, in much the same way as varnishing does. It is true that Senator[9] found, in the course of some experiments undertaken with a view to the reduction of fever by this means, that very extensive varnishing of the skin in human beings did not produce the effects which are observed when animals are similarly treated; but he attributes this to the fact that small animals have a greater surface in proportion to their bulk, and himself points out that children more closely resemble animals in this respect and are much more sensitive to surface cooling, and that therefore they would be more likely than adults to exhibit a conspicuous fall of temperature under such treatment. On such a hypothesis it is easy to explain the absence of conspicuous lowering of temperature in the cases in which the sclerema is limited to the dorsal aspect of the body. Since there is a tendency for the sclerema when once arrested to recede somewhat rapidly it seems possible that, provided adequate nourishment could be administered and if the warmth of the body were sufficiently maintained by placing the infant in an incubator, the time of most danger might be tided over, and recovery might result in some at least of the graver cases of sclerema neonatorum. All writers agree that external warmth is clearly indicated in such cases, and it sometimes has appeared to have very beneficial results.

In conclusion, a few words must be said about treatment by drugs. I have already mentioned that Dr. Angel Money

[3] THE LANCET, vol. i. 1889, p. 526.
[4] Transactions of the Clinical Society, vol. xvi., p. 262.
[5] Brit. Med. Jour., vol. i. 1889, p. 994.
[6] Archives of Dermatology, 1882, vol. viii., p. 337.
[7] Wiener Medicinische Presse, 1881, pp. 1375 and 1412.
[8] Clinique des Nouveau-nés: l'Athrepsie, 1877, p. 116.
[9] Virchow's Archiv, vol. lxx., p. 192.

attributed much efficacy to the inunction of mercurial ointment in his case, for when this treatment was commenced the induration, which had up to then been extending, began to recede. When, however, we turn to Dr. Barlow's case we find that a similar arrest and recovery were observed although no mercurial treatment was employed; and in my case the improvement had certainly commenced during the week which preceded the inunction of mercurial ointment. After the mercurial inunction was stopped the improvement continued uninterruptedly, but it is my impression that it was not quite so rapid as during the four weeks of mercurial treatment.

Chandos-street, Cavendish-square, W.

A CASE OF STRANGULATED OBTURATOR HERNIA IN A WOMAN AGED SEVENTY-EIGHT YEARS TREATED SUCCESSFULLY BY LAPAROTOMY.

BY WILLIAM H. BENNETT, F.R.C.S. ENG.,
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THE number of cases recorded of recovery after strangulated obturator hernia is comparatively small. The following case presents certain points of interest which seem to justify its publication.

A woman seventy-eight years of age was admitted into St. George's Hospital under my care on March 29th, 1895, with a history of having been fairly well, occasional attacks of colic excepted, until four days previously, when, after making a hearty meal of mutton chops, she was seized with violent griping abdominal pain. Nausea followed almost immediately, and in a few hours vomiting set in. The vomiting continued up to the time of her arrival at the hospital, and for twelve hours it had been stercoraceous. No action of the bowels had occurred for four days. On admission the patient was emaciated and very feeble. There was a strong fæcal odour about the breath; the face was "pinched" and had a marked "abdominal aspect." The pulse was weak, and the temperature subnormal. Acute intermittent griping was complained of, principally below the umbilicus. There was an ill-defined desire to defæcate, but inability to do so. No blood or slime had been voided. The abdomen was only slightly distended, and upon manipulation violent, erratic, and painful peristalsis was excited. Examination by the rectum and vagina gave a purely negative result. Beyond the pain mentioned there was no other severe discomfort of any kind. As the case was clearly one of acute intestinal obstruction, and as no hernial tumour could be detected at any of the abdominal rings median laparotomy was performed at once. Upon opening the abdomen the small intestine as far down as the middle of the ileum was found to be distended; below that point the intestine generally was collapsed. The collapsed portion was traced down deeply into the left side of the pelvis, where it was tightly nipped under the arch of the pubes. Gentle and steady traction served to disengage a strangulated knuckle of gut about two inches and a half long, much congested and in parts ecchymosed; at one spot there was a laceration in the peritoneal surface surrounded by lymph. The damaged part was carefully cleansed and returned into the abdomen. No irrigation was used. Upon examining the left obturator foramen subsequently, it admitted readily the tips of two fingers, which passed through into a smooth sac of about the size of a pigeon's egg. The abdominal wound was united by fish-gut sutures in the usual way. Recovery followed and was uninterrupted. For the first two days there was some weakness, which rapidly passed off. The bowels acted with the aid of an injection of warm water on the fourth day after the operation; the stitches were removed on April 4th, and the patient left the hospital in her usual health on April 17th—i.e., less than three weeks after her admission.

It will be seen from a perusal of these notes that, as often happens in such cases, all the specific signs of obturator hernia mentioned in the text-books were entirely wanting in this instance. There was no fulness in Scarpa's triangle, the characteristic obturator nerve pain was absent, and nothing abnormal could be detected either by rectal or vaginal examination. The symptoms were, in fact, merely those of acute intestinal obstruction, clearly due—judging from the characteristic, erratic, and painful peristaltic action—either to internal hernia, strangulation by a band, or to volvulus. The absence of distention after so long a period of strangulation and vomiting was a sure indication that the constricting medium was not of the sharp-edged kind. The diagnosis of obturator hernia was quite impossible, as is generally the case, although I mentioned it as being one of the possible conditions existing in the case before operating. The ease with which the hernia was reduced was—considering the time it had been strangulated—noteworthy, but was fully accounted for by the large and round-edged ring. Perhaps the most interesting part of the case is the recovery of a patient seventy-eight years of age after laparotomy under the circumstances described, especially when the damaged condition of the gut and the long period over which vomiting had extended are taken into account. Strangulated obturator hernia is very uncommon, and recovery after operation is rare. I have no recollection of any recorded case of recovery at so late a time of life as this patient's. Recoveries after laparotomy for the removal of ovarian tumours have of course been recorded up to a much greater age; but such cases, I need hardly say, are not comparable with a case like the one now described, in which the patient was suffering from the collapse entailed by strangulation of gut with peritoneal lesion, together with the exhaustion and depression caused by long-continued vomiting, which for some period had been feculent. The case affords, I venture to think, a striking instance of the great vital powers sometimes met with in old people who at first sight would appear to be too feeble to resist any great call upon their strength.

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APOLOGIA PRO ELECTRICITATE SUÂ.

BY W. S. HEDLEY, M.D. EDIN.

THOSE who have watched the solid, even brilliant, progress of electrotherapy in recent years acknowledge with regret and not without surprise that there is still a remnant of physicians who seriously doubt its capabilities, who refer to it as a "discredited agent," as something that has been tried and found wanting, or who, falling back upon a favourite phrase, express themselves as "disappointed in it." Of this remnant there is a certain minority even more aggressive in its attitude, more hostile in its scepticism. It is composed of those who roundly assert that neither does there exist any rational basis for the employment of electricity in medicine, nor is there any satisfactory demonstration of its curative effects; that once an agent of undoubted therapeutic promise, electricity now stands forth an admitted failure; that any good results that follow its use are due to psychical influence and rest on the baseless fabric of "suggestion." Scepticism of so pronounced a type is difficult of approach. It is useless to invite attention to the steady evolution of electrical methods in medicine made evident by the history of a hundred years; to point to that first period, the period of static electricity, which, broadly speaking, covered the second half of the eighteenth century, and is associated with the names of Jallabert, Mauduyt, and Bonnefoy; to that second period, commencing with the discovery of the "voltaic pile" (1800), associated with the names of Bischoff, Walther, and Most in Germany, of Sue, Thillaye, and Isnard in France; to that third period, the "period of the induced current," which, springing from Faraday's discovery of the phenomena of electro-magnetic induction (1831), ended with the brilliant work of Duchenne, to a period partly concurrent with the latter, represented by half a century of solid and lasting work bearing on the physiological effects and therapeutic action of the constant current, an epoch which recalls the names of Dubois-Reymond, Pflüger, Remak, Benedict, Brenner, Baierlacher, Ziemssen, Chauveau, Onimus, Legros, Boudet, and terminates about the middle of this century's "eighties" with the epoch-making works of De Watteville and of Erb. Approaching the present time, the apologist points in vain to the milliampèremeter, the voltmeter, the coulombmeter, to a period

of improved apparatus, of accurate measuring instruments, of modern currents—to a period, therefore, when the medical man finds himself in a position better than ever before to turn electrical energy into useful work. Equally useless is it, in presence of such a scepticism, to plead for electrical treatment that it ought to be judged by the same standards that apply to other remedial measures; useless to offer demonstrative evidence of the curative results that very constantly follow its efficient application, and to prove that as much at least is known of the nature of electricity and its way of working as is known of the action of many a drug that at the present moment holds an honoured place in the Pharmacopœia. The answer to such an appeal is a shrug of the shoulder or a shake of the head, with the inevitable reference to "suggestion" or "expectant attention." Now, this theory of "suggestion," associated mainly with the names of Möbius and of Rosenbach, may be briefly noticed. It announces the doctrine that electrisation is merely a branch of psychotherapeutics, a doctrine which, shallow as it is and shortlived as it will doubtless prove to be, is nevertheless a form of heresy of a more or less seductive kind. Its little band of adherents ought to question themselves as to the reason for the faith that is in them. Before committing himself to such a belief the medical student, who is perhaps more than anyone else likely to be attracted by it, is reminded that in the first place he admits the effects of electricity to be physically and mathematically demonstrable, and in the second place he is aware that "suggestion" is as old as medicine, and that every drug has a psychical as well as a physical side to it.[1] He does not, however, say that because a bread pill may sometimes induce sleep if taken under the impression that it contains opium, that therefore opium acts by suggestion, neither does he say that because the actual cautery is sometimes successfully used in the treatment of hysterical paralysis that therefore the red-hot iron always acts by suggestion.[2] And from neuralgia he may learn a lesson. No doubt he is familiar with the fact that a neuralgia will often yield with surprising readiness to the galvanic anode; why in such cases, if the remedy act by "suggestion," does a change to the cathode increase the pain?[3]

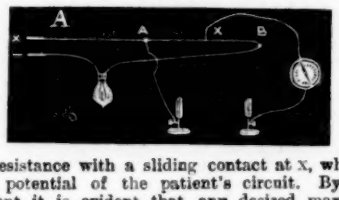
The steady progress which a short historical survey makes evident need not obscure the fact that, whatever its position at present and whatever its prospects in the future, the use of electricity in medicine has undoubtedly had a chequered past. It has suffered by the activity of impostors, by the prejudices of its enemies, by the intemperate advocacy of its friends, and perhaps more than all by the crude empiricism of its methods. Those medical men who have attempted its employment have not always duly recognised the fact that the physical problem underlies the biological one, and that it is of vital moment to know something of the nature of the energy they employ. Until comparatively recent years this has scarcely been possible of electricity. Modern electro-therapeutics may in one sense be regarded as the practical outcome of those modern views which, inaugurated by Faraday and developed by his followers, have resulted in the electric dynamo, the electric light, the telephone, and many another application of electrical science to industrial pursuits. In point of fact, medical electricity "came before its time." It sprang from no solid basis of sound electrical knowledge. Carried away by the striking neuro-muscular phenomena that attend its application to living conductors, yet without any adequate knowledge of its physical nature, enthusiasts began to apply it *a tort et a travers*, without method and without measurement, and to all sorts and conditions of disease.

Medicine cannot reasonably cultivate an attitude of aloofness towards an agent to which it owes so much as it does to electricity. None deny that a fast increasing knowledge of neuropathology is largely due to electrophysiological research. Long ago it was pointed out that by the action of electricity on vital structures a surprising accuracy of diagnosis may often be arrived at, and that not only does it enable us to interrogate the neuro-muscular apparatus and ascertain the nature of a lesion, but sometimes even to foretell the duration of an illness.[4] Electrical methods are now beginning to throw a not less important diagnostic light on a class of obscure gynæcological cases where diagnosis is of vital moment, a diagnosis which "at one time will point to operative interference, at another will disarm the surgeon's band and show a conservative treatment to be not only possible but almost certainly successful."[5] It is certain that in the use of the Faradic current of tension and of the galvanic current respectively, for the purpose of distinguishing inflammatory from non-inflammatory pain, gynæcology has acquired a real addition to its diagnostic resources. To test the claims of electrical treatment it must be judged by the same standards that apply to the rest of medicine. What conditions is an accredited therapeutic agent expected to fulfil, and in which of these has electricity been tried and found wanting? Its physical and physiological effects are easily demonstrable. It is accurately measurable and under safe, easy, and complete control. Then comes the crucial question, Has electrical treatment made good its claim to curative power? Has it, when brought face to face with disease, had a success as constant and as clear as the average drug? A drug is looked upon as a curative agent because, other conditions being the same, effects follow its administration which without it would be absent. This "method of difference" in establishing the causality of an agent is sufficient for the ordinary affairs of life. Apply it to electro-therapeutics.

The three conventional forms of current hitherto used in medicine—viz., the galvanic, the faradaic, and the so-called "static"—are now supplemented, and to some extent supplanted, by electricity in certain new modalities. There are: 1. Those pulsatory currents produced by the electro-motive force of the ordinary constant current dynamo—currents which for medical as well as for other uses can now be turned on as required, like the water or the gas. 2. There are alternating currents of a more or less perfectly sinusoidal character, the frequency of which may vary from a few alternations to many hundreds or even thousands a second. The ordinary alternating light circuit furnishes a current of this order with a frequency of about 7000 to 10,000 alternations a minute. This as well as the constant current can be safely used through a resistance or a sliding shunt. 3. There are those oscillatory currents produced by the discharge of a Leyden jar, called by Dr. Morton (their discoverer) the "static-induced," which, although produced by an old and familiar apparatus, have every right to be ranked as modern currents. 4. There are currents of high frequency and potential, whose alternations may number hundreds of thousands, millions, or even exceed a billion a second.

1. With reference to currents produced by the constant current dynamo it is to be remarked that although "continuous" or "constant," and always flowing in the same direction, they are not absolutely uniform in strength. They are "pulsatory." They thus differ to some extent in physical nature from the current produced by the uniform electro-motive force of, say, a Leclanché cell. Small as this difference may be from an electro-therapeutic point of view, it must not be lost sight of. It is usually considered that with a 100-volt light circuit current passed through a controlling resistance pain is greater than when supply is drawn from a battery of low voltage. An explanation may perhaps be found in the physical character of the current rather than in its originally high voltage. The current controller or adaptor may be constructed on the principle shown in the following sketch, where A B is a fine platinoid wire of

FIG. A.



suitable resistance with a sliding contact at X, which regulates the potential of the patient's circuit. By such an arrangement it is evident that any desired maximum or minimum of potential difference can be secured in proportion as the resistance between the runners (or the runner and the other shunt connexion) varies between zero and the total resistance of the wire. The variation of the difference of potential can be as slow and gradual as is desired. In practice the wire is coiled. The arrangement is, in fact, a "sliding shunt," and supplies, in the opinion of the writer, the best form of current controller or "reducer of potential" for adapting light circuits to medical use. An

[1] Lombroso: Revue Internationale d'Electrothérapie, 1894, p. 65. Paris.
[2] Ibid.
[3] Ibid.
[4] Erb: Electrotherapeutics. Smith, Elder, and Co.
[5] Apostoli: Revue Internationale d'Electrothérapie, 1892, p. 68. Paris.

instrument for the above purpose has lately appeared which, with many excellences, is not without faults. It consists of a rheostat having a total resistance of about 33,000 ohms, with a 16 candle-power lamp placed in circuit with each of the "leading in" wires "to protect the patient in the event of a short circuit." It has been pointed out in THE LANCET how futile is such a device. A lamp cannot be trusted to as a circuit breaker for medical purposes; it may allow twice its proper amount of current to pass before breaking. The magnetic cut-out[6] is, so far as the writer is aware, the only arrangement yet suggested which can be seriously trusted to for the purpose in question; and even here it is to be remembered that the action is not quite instantaneous. In the adaptor under consideration there is also a third lamp arranged "in shunt" with the rheostat. The throwing in of this shunt reduces the voltage of the 115 volts circuit to 60 volts.

2. Of modern currents the one which will perhaps prove the most important for medical use is that form of alternating current whose curve is of the sinusoidal type. It takes its name from the fact that the current strength "follows the law of sines as regards its variation in time; it is a simple harmonic current"; a current which gradually attains its positive and negative maximum, shows no lost time and no actual interruptions. It is represented graphically by a curve of sines which may be contrasted with the very sudden and dissymmetrical changes of potential shown by the pointed curve of a coil's alternations. Inasmuch as the excitant action of an electric current bears a direct ratio to the suddenness of the fall of potential, it follows that the sinusoidal current will be better tolerated than the more brusque alternation of the coil. But on this very account it is equally evident that the latter for certain purposes can never be supplanted by the current in question.[7] It appears by the researches of d'Arsonval that in the case of animals submitted to the action of sinusoidal currents an examination of the blood by the usual physiological methods shows a greater intake of oxygen and a greater output of carbon dioxide, a fact which of course in its turn points to increased metabolism throughout the body. A similar increase in the oxidation as evidenced by the increased excretion of urea has been proved by Gautier and Larat as the result of the therapeutic use of currents of alternating light circuits; but these are not of course strictly sinusoidal. They may be used through a rheostat and cut-out or by means of the sliding shunt already described. A small therapeutic alternator in which the rapidity of alternation is under the control of the operator furnishes in the experience of the present writer a current at once more useful and more easy to handle.

3. The so-called "static-induced" current is the direct product of the static machine with condensers. The patient is not insulated, however, but the connecting rods between the two Leyden jars are removed, the inner coatings are connected with the discharging rods, the latter being separated by a small spark gap.[8] If, now, a rheophore held in each hand be attached to the outer coating of each Leyden jar it is evident that such an arrangement gives two circuits: one, the primary, includes the discharging rods, the spark gap, and the inner coating of the Leyden jars; in the other, the secondary or induced, there are the patient's body, the rheophores, and the outer coating of the jars. A current is thus obtained for which striking physiological effects are claimed; and certainly the ability to secure by its means powerful muscular contraction without pain is as wonderful as it is useful. More remarkable perhaps than the production of a new current from the static machine is the striking revival of an old one. The so-called electrostatic bath, with all its accompaniments and modifications, "souffle," "douche," "frictions," exactly as described by Mauduyt and the pioneers of the eighteenth century, has once more vigorously pushed itself to the front. It consists, as everyone knows, of the simple placing of the insulated body in connexion with one pole of the static machine. In explanation of the effects long known to follow its use it is now ascertained that this procedure produces well-determined effects, such as increased skin action effects on blood pressure, increase in the frequency and depth of the respirations, as well as (with the positive bath) an increased excretion of urea and of phosphates. Keeping in view the ever-changing electrical conditions of the air and the influence of the weather upon health, it is not impossible that "the electrics" of the atmosphere will eventually prove the key to treatment by the electrostatic bath.

4. Currents of high frequency and potential are generally obtained for medical purposes by means of the oscillating Leyden jar discharge traversing a solenoid. Such currents may carry energy enough to light a 5 candle-power lamp, and if the human body with its thousands of ohms resistance be at the same time placed in circuit there will scarcely be a perceptible diminution in the brightness of the glow; and yet, notwithstanding the tremendous amount of energy passing, there is scarcely a consciousness of its passage. Pain is absolutely absent. Why this harmlessness, whence this immunity from pain? Many theories have been advanced, all of them perhaps wide of the mark, but probably an inhibitory or "throttling" effect of the nature shown in an experiment shortly to be detailed enters into the question. Whatever the explanation, it is to be noticed that painlessness seems to be the great characteristic of all high frequency work. The physiological effects claimed as the result of passing these high frequency discharges through the body are many, but amongst the most noteworthy are (1) a considerable increase in the nutritive exchanges as evidenced by a greater absorption of oxygen and an augmentation in the carbonic acid exhaled: and (2) a vaso-dilator action on all the bloodvessels, resulting in a fall of blood pressure. Such currents are already emerging from the stage of experiment and promise, soon to bear fruit in actual practice. It is to be noticed that "rapid pure electric alternations" produce no excitatory action on the neuro-muscular apparatus, but seem to exert merely a paralysing or fatiguing influence, or what has been termed a "throttling" effect on the passage of another stimulus. The recent experiment of Lodge and Gotch, which points to this conclusion, is as follows: Taking the physiological limb and applying a stimulus of a rapidly alternating character directly to the nerve, "at the same time as some other well-known one-hundredth volt, stimulus is applied to another part of the same nerve further from the muscle; it can be shown that rapid electrical alternations, if entirely unaccompanied by static charge or by resultant algebraic electric transmission, evoke no excitatory response until they are so violent as to give rise to secondary effects such as heat or mechanical shock. Yet notwithstanding this inaction they gradually and slowly exert a paralysing or obstructive action on the portion of the nerve to which they are applied, so that the nerve impulse, excited by the feeble, just perceptible, one-hundredth volt stimulus above, is gradually 'throttled' on its way down to the muscle, and remains so throttled for a time varying from a few minutes to an hour after the cessation of the violence."

Turning from this the most modern of currents to that which is the most ancient, the familiar spark of the so called static machine, the attention is arrested by a striking difference. That excitatory action so completely absent in the former is in a marked degree present in the latter. Apart, however, from this great physiological difference the current of pure rapid electric alternations and the static spark have many points in common. Each static spark seems single, but it in reality passes backwards and forwards hundreds of thousands of times. It oscillates, each oscillation growing less and less until the conductor is discharged. It is not to the conductor, however, that attention ought to be directed, but rather to the surrounding medium, to the electrostatic field, to the dielectric strained by electromotive forces, and the insulating power of the air eventually breaking down under the electric stress or tension. At the same time from the discharging circuit "waves of electrical distortion," to and fro disturbances of the ether, spread and radiate in all directions. This is the genesis of what are known as oscillatory currents, currents which are for the most part sinusoidal in character. In all electrical work it is instructive to transfer the attention from the conducting wires to what is going on outside them and to picture the ether disturbed by electromotive forces propagating the disturbances by undulatory or wave movement, until the energy becomes dissipated or taken up by some

[6] THE LANCET, April 9th, 1892.

[7] The subject of coils cannot here be entered upon; it is sufficient, however, to remember that the modern instrument furnishes currents of a range and quality far superior to those of the "faradaic machine" in ordinary use in this country. This superiority is secured not only by the number and variety of the windings of the secondary coils, but by the nature of the interruptor, which is not a vibrating one and has a separate source of supply to "action" it. The result of such arrangements is that not only is irregularity in action avoided, but a range of rapidity of alternation is obtained varying from the slowest rate (for muscular action) to 30,000 a minute for sedative effects.

[8] In practice the circuit is usually broken by a special electrode.

suitable appliance and utilised for work. The energy, however, does not, according to "modern views," travel by the conductor, but through the insulating medium, or dielectric. The conductor, whether it be a wire or a living body, only *guides* the energy and concentrates it for useful work. Applying this to that very imperfect conductor, the human body, it is evident that the latter may be regarded as an appliance capable of utilising in a variety of ways energy transmitted by the ether. It resembles an ordinary metallic conductor in that it guides the effects transmitted by the ether contained in the dielectric, but it differs from the wire in the fact that the guidance is probably effected by that peculiar form of conduction known as electrolytic; and this leads up to the infinitely important point that electrolytic conduction is probably "invariably accompanied by decomposition, and only occurs by its means."[9] Further, Helmholtz has shown that "the most infinitesimal electromotive force is sufficient to effect its due quota of decomposition." From a different standpoint it may be allowable to think of the ether vibrations springing from some electrical source as impulses communicated, motion added, to the already pulsating atoms of a vital structure. Giving further play to such a train of thought, it is possible to imagine certain of the delicate mechanisms of the human body as "receivers" syntonised for the reception of similarly vibrating ethereal impulses radiating from some given source. The relationship of physiology with physics is strongly brought out in a theory (whether it prove right or wrong) recently suggested by Professor Lodge. It is found that a tube of metallic filings—i.e., a series of loose contacts—diminishes its electrical resistance when exposed to "even the distant neighbourhood of a Leyden jar or coil spark." Such an arrangement is called by Lodge a "coherer," and he suggests that perhaps the eye acts on such a principle. He "wishes to guess that some part of the retina is an electrical organ, say like that of some fishes, maintaining an electromotive force which is prevented from stimulating the nerves solely by an intervening layer of badly conducting material with gaps in it, but that when the light falls upon the retina these gaps become more or less conducting and the nerves are stimulated." This is the so-called electrical theory of vision, and to Professor Lodge, and to him alone, is due the merit of having suggested it. Although the nature of the action of the eye as a detector of radiation is still little better than a guess, it cannot be said that there is anything extravagant in the idea that the hexagonal pigment cells or the rods and cones of the retina act, under the impulse of those ether vibrations which constitute light, in a way almost identical with the action of a coherer. It seems even conceivable that other histological arrangements—e.g., those nerve fibrils which conduct yet only touch and do not anastomose, those motor nerve endings which are only *in contact* with the sarcous substance; indeed, any conducting arrangement in the animal body which may be classed as a "bad contact"—may constitute the physiological analogue of what would be electrically known as "a coherer."

Descending from the region of wild dreams and speculations, many of which are still immeasurably short even of the experimental stage, and reverting to a sober survey of medical currents, the attention is arrested by the want of uniformity in their designations. A new nomenclature seems desirable and almost necessary—a nomenclature in which electrical currents for medical purposes can be distinguished by their physical character rather than by the name of a discoverer or the mode of their production. Such a classification has recently been formulated by Professor Houston and Mr. Kennelly, two distinguished physicists to whom electro-therapeutics is already under many obligations. It is pointed out that medical currents can be referred to four main types—viz., continuous, alternating, intermittent, and convective. These are subdivided as follows:—1. Continuous currents may be (1) uniform and (2) pulsatory. The former class is produced by a uniform electromotive force, such as that of a Leclanché cell, and would comprise those currents at present known as galvanic. A pulsatory current is, as already stated, continuous, and always flowing in one direction, but not uniform in strength. Such a current is produced by the constant current dynamo. (Fig. B.) 2. Alternating currents—that is, currents which periodically reverse their direction—may be symmetrical or dissymmetrical: the symmetrical may be sinusoidal (Fig. C) or non-sinusoidal (Fig. D). The electromotive force of the former is represented by a curve of sines. In a non-sinusoidal alternating current the positive and negative maxima are equal but not smoothly attained, and the graphic representation is of a more or less angular, not of a wavy, character. Voltaic alternating currents are of this type. The most familiar example of the dissymmetrical alternating current is that produced by the ordinary medical induction coil. (Fig. E.) Intermittent currents are oscillatory and non-oscillatory. "An oscillatory current is an alternating current, usually sinusoidal in type, but decaying in amplitude—i.e., each wave is smaller than the preceding one.

FIG. B.

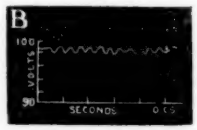
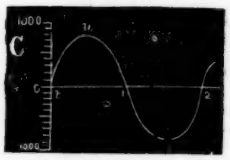


FIG. C.



Oscillatory currents produced by the discharge of a Leyden jar correspond to the 'static induced.' They are usually of extremely brief duration and of very high frequency, a whole series of perhaps ten oscillations being completed in, say, the 20,000th part of a second. Non-oscillatory intermittent currents are produced by the discharges of influence machines through circuits unfavourable to the

FIG. D.

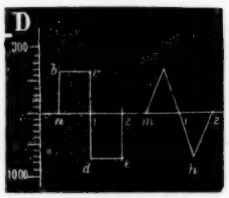


FIG. E.

Figs. B., C., D., E., are after Houston and Kennelly.

development of oscillations. Franklinic currents are of this nature. Convective currents or convective discharges are produced by the convection of electrified particles of air or other material (the static breeze)."[10] The classification thus detailed is as follows: (1) continuous current—(*a*) uniform, (*b*) pulsatory; (2) alternating—(*c*) sinusoidal, (*d*) non-sinusoidal, (*e*) non-symmetrical; (3) intermittent—(*f*) oscillatory (*g*) non-oscillatory; (4) convective—(*h*) static breeze. Such a nomenclature may require modification, but it is very practical and possesses the great advantage that in the selection of a current for medical purposes the name points directly to its physical character, and in some measure, therefore, to the therapeutic indication it may be expected to fulfil.

Looked at from the standpoint of modern practice, the field of electro-therapeutics seems broadening. No longer limited to strictly local applications, it now embraces those procedures whose aim it is to influence, and which demonstrably can influence, the entire economy. Its object is so to utilise electro-physiological data as to influence innervation, heart action, muscular conditions, respiration, temperature, the oxidations, every functional action and metabolic change, and not least by the process darkly known as "vaso-motor influence" to modify and control the blood-supply to organs and tissues. There are times when the power of electrisation to reach an internal organ will depend not on any direct action inherent in an electric current, but on an influence which, having its starting point in the electrical stimulation of some surface area, and travelling perhaps *viâ* nerves of common sensation, will strike the spinal cord at some special spot, and reflected thence will find a route by filaments of the sympathetic to some particular organ, an organ thus in neural relationship, through this special segment of the cord, with that area of cutaneous surface which was the site of the electrical stimulation. Such a process not only throws light on the *rationale* of peripheral electrical excitation, and especially of the action and uses of the faradaic brush, but is

[9] Lodge: Modern Views, p. 79. Macmillan and Co.

[10] Houston and Kennelly: The Polyclinic, September, 1894. New York.

one of the many points which, if duly weighed, tend to a wider conception of the entire question of treatment by electrical methods. To "kick up" a set of sluggish muscles into action, to stimulate, if such expressions be allowable, the neuro-muscular apparatus into a display of electrical gymnastics, can no longer be considered the sole aim and object of electrisation. Such effects doubtless rank amongst the most striking and valued effects of electric currents, but cannot in the presence of those varied and far-reaching influences of the kind that have just been considered any longer claim exclusive possession of the field. The latter view begins now to be clearly reflected in practice. The revived use of the electrostatic bath, the methods of central galvanisation and of general faradisation, and general applications to the entire body by means of the water bath through which sinusoidal or other currents are passing, are procedures which seem to be supplementing and in some measure displacing the more strictly localised forms of application; and now that it is known how to obtain currents of high frequency and potential, and that it has become possible to demonstrate the physiological qualities that belong to them, it becomes probable that there will soon be the opportunity to realise in practice the therapeutic effects not only of passing these high frequency discharges through the body, but of subjecting it without contact with the terminals to a kind of electrical bombardment in the rapidly alternating electrostatic field between them. This is new ground; once broken, it is likely to prove a wide and fruitful field. Progress in this direction is rapid and striking. France, America, and Germany are at the present moment each the active centre of an onward movement in electro-therapeutics, a movement which experimental investigation, clinical observation, and organised association go hand-in-hand to accelerate and to strengthen. Another mark of progress appears in the fact that physiologists begin to recognise that chemical and electrical processes are insepaarble from those that have hitherto been called vital, and that electromotive force is very constantly the outcome of physiological action. There are signs that physics begins to "encroach on the domain of physiology and that medical men are more and more turning their attention to physics."[11] What has been called "physical biology" or "biological physics"[12] seems already beginning to differentiate itself and to stand out as a special branch of science. It forms a kind of neutral ground where medical and electrical science find a common holding point and a common end. To the medical man his line is clear. With the lessons of experience well in view, he takes his stand upon the broad principles of electro-physics and the known action of electrical currents on vital structures. When such indications fail to guide him and fail they often must, he will not on that account fold his arms in helpless inaction, but falling back upon an enlightened empiricism he will gently feel his way. He will "not ask, but try." He will not be afraid to acknowledge that after all is said therapeutics is to a large extent but a process of cautious experimentation.

Brighton.

HEPATIC ABSCESS FOLLOWED BY AMŒBIC DYSENTERY; OPERATION; RECOVERY.

By JOHN CURNOW, M.D. LOND.,

PROFESSOR OF ANATOMY IN KING'S COLLEGE, LONDON; PHYSICIAN TO KING'S COLLEGE AND THE SEAMEN'S HOSPITALS.

THE following case is of special interest as demonstrating the causal connexion between dysentery and the so-called tropical abscess of the liver. In almost every case of hepatic abscess which I have seen at the Seamen's Hospital during the past ten years there has been a history of an antecedent attack of dysentery, but this is the first case in which the causal connexion has been so definitely proved. Murchison's great authority is always quoted against this view, but he seems to have based his conclusions on the statistics of Indian observers rather than on his own experience. The migration of the amœba coli from the intestine to the liver must now take the place of chill, excessive eating and drinking, tropical climate, and other vague generalities to which tropical abscess is so frequently ascribed. Amœbæ coli have been found in the pus of a liver abscess by many observers, and also in the dysenteric stools at the same time by pathologists in Germany and in America; but so far as I am aware this is the first occasion in which their coexistence has been demonstrated in this country.

The patient, a Lascar aged forty-two years, was admitted to

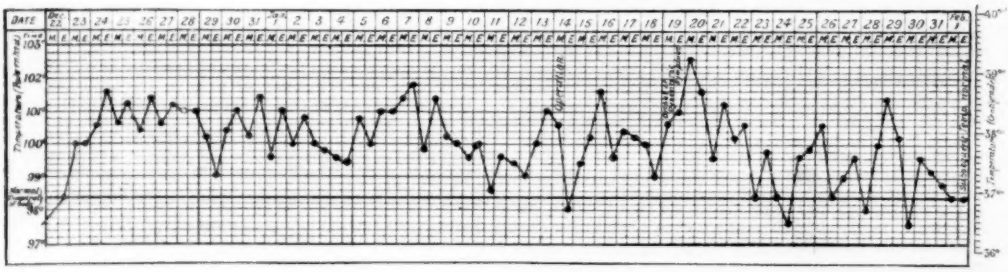
the Seamen's Hospital, Greenwich, on Dec. 22nd, 1894. On admission he complained of pain in the right side of the chest, cough, fever, and a feeling of general illness for one week. His general health had been good, and he had had no serious illness. In June, 1893, while in Calcutta, he had an attack of dysentery with some tenesmus and tormina, and passage of blood and mucus. He got quite well in about twelve days, and since then had not been similarly affected,

his health being fairly good. He was taken ill with the present attack while on board his ship in the West India Dock. He complained of a constant dull aching pain in the right side and some cough; these symptoms gradually became worse in the course of a few days. On examination he was found to be a poorly nourished man, with an anxious expression and slightly accelerated breathing. There were signs of fluid in the right pleura

[11] D'Arsonval, Academie des Sciences, Paris, 1893.
[12] Ibid.

from the angle of the scapula downwards; there were a few scattered catarrhal sounds in both lungs. The heart's apex was beating in the fifth intercostal space, half an inch outside the nipple line. The sounds were healthy. Liver dulness began above at the sixth rib in the nipple line, while behind and in the axilla the upper border of the dulness was indistinguishable from that due to the fluid in the pleura. The edge of the liver could not be felt below the costal margin. There was no obliteration or bulging of the lower intercostal spaces on the right side, but there was slight tenderness on pressure over the liver, and some pain on deep inspiration. The bowels were regular, and the stools normal. The tongue was slightly furred. The temperature (see chart) varied between 100° and 101·8° F., the diurnal variation being about 1°; there were no rigors, but there were occasional irregular sweatings. The condition of the patient began to get worse and the pain in the right side more severe. The right pleura was aspirated on three occasions in different situations, but only ten ounces of clear straw-coloured fluid were withdrawn, after which, however, the signs of fluid disappeared, so that it was thought there had been only a thin layer of fluid lying over the base of the right lung. The position of the heart's apex remained fixed. Aspiration did not improve the condition of the patient, the temperature still remaining high. It was thought very probable that there was an abscess in the liver, and so it was decided to explore that organ if the patient did not improve. On Jan. 13th, 1895, three weeks after admission, the patient had a very severe attack of pain in the right hypochondrium, so the liver was at once explored. From the second puncture some thick, sweet-smelling chocolate-coloured pus was withdrawn. Next morning Mr. W. Johnson Smith, F.R.C.S., removed about an inch and a half of the seventh rib, lying midway between the nipple and anterior axillary lines. When an incision into the liver was made a large quantity of pus, similar to that removed by the exploring needle, escaped. The abscess was situated in the convex portion of the right lobe, lying fairly superficial, and, as far as could be judged by the finger, of large size. The limits of the cavity could be made out in all directions except upwards and backwards, where the point of the finger reached a small opening, leading presumably into another abscess cavity. A large drainage tube was inserted and the patient sent back to bed. After the operation the general condition of the patient began to improve, but his temperature became higher and more irregular. There was an abundant discharge of pus, at first chocolate-coloured and rather like anchovy sauce, but later it became more healthy and yellow in appearance. The wound was dressed frequently, and the cavity washed out once daily with a weak solution of iodine water, whereupon it quickly began to diminish in size. As the temperature was still high and irregular the right pleura was again aspirated, and nine ounces of clear fluid were withdrawn, with the effect of restoring the pulmonary resonance, and allowing some rough friction sounds to be heard. Three days after the operation the patient had a sharp attack of dysentery, lasting about ten days, which yielded to a daily irrigation of the rectum with a weak solution of quinine, a pill containing mercury, ipecacuanha, and opium being given internally. The temperature came down finally on Feb. 1st, and he made an almost uninterrupted recovery; on April 21st the wound had completely healed, and he was quite well.

Remarks.—The main point of interest in the case, apart from the recovery of the patient, is the discovery of the amœbæ dysenteriæ in the pus, from the liver, and in the evacuations. Specimens of the pus were frequently examined upon the warm stage, but very accurate observations were not easy on account of the density of the pus and the great number of other elements besides the amœbæ. The shape of the living amœbæ was very various and irregular, the commonest variety being oval or pyriform. The outline of every amœba was very distinct, giving the appearance of a dense investing or limiting membrane. The most noticeable feature was the presence of vacuoles of various sizes, one being commonly noticed to be much larger than the rest. The division of the body of the amœba into an ecto- and endo-sarc was sometimes noticed, though rarely; this distinction was more marked in the stained preparations. The ecto-sarc was seen to be quite clear and highly refractile, while the endo-sarc, in addition to the vacuoles, contained several blood-corpuscles, resting on a groundwork of granular material. The size of the resting amœbæ was very variable, ranging in oval organisms, from a long diameter of 70μ to 20μ, and a transverse diameter of about 15μ to 20μ. The round amœbæ had in most instances a diameter of 20μ to 30μ. In some of the amœbæ as many as sixteen to twenty red corpuscles were seen, some retaining their yellow colour, while others were quite devoid of pigment, looking like round or oval colourless discs, in many cases overlapping each other. In the fresh specimens a nucleus was only rarely seen, and then with difficulty. On the warm stage some of the amœbæ were in active movement, altering their position from time to time. These movements were effected by the throwing out of pseudopodia, which became fixed, and the body of the amœba then merging into the processes which had been thrown out. These pseudopodia were of various lengths, the majority being short, thick, and with round, blunt extremities. No movements of the protoplasmic granules were noticed. A large number of stained preparations of the hepatic pus was made, the following being the method employed. Some pus was shaken up in a test-tube with five or six times its volume of logwood stain diluted to a claret colour and containing, as a preservative, 1 per cent. of hydrocyanic acid. This was shaken occasionally for two days, and after the pus had settled to the bottom of the tube the clear stain was decanted off, and the residue was washed with camphor water. Some glycerine was poured into the tube and collected at the bottom, into which the stained pus was allowed to settle, and was then ready for mounting. For mounting preparations in Canada balsam the same method was adopted, only that after the pus had been stained and washed it was dehydrated by alcohol, cleared by setting in coal-tar naphtha, and then mounted. In the stained preparations the details of the amœbæ could be more accurately made out than in the fresh specimens. In almost all amœbæ the nucleus was prominent and deeply stained. Besides a large number of red blood-corpuscles and the granular groundwork of the organism numerous cells with deeply stained nuclei were seen and taken to be pus cells. Another interesting feature of the case was the attack of dysentery from which the patient suffered three days after the opening of the liver abscess. Since the first attack eighteen months previously the patient had had no return of the dysentery, so that it is possible that the opening of the abscess which again started the dysentery. The stools were examined microscopically, and besides numerous blood-corpuscles a few dead amœbæ were seen, all of them having a circular outline. The facts that amœbæ were found, although in small numbers, in the stools, and that the dysentery yielded so readily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to large rectal injections of quinine, seem to show pretty clearly the relation of dysentery to liver abscess and of the amœba dysenteriæ to both affections. The length of time from the primary outbreak of dysentery to the onset of symptoms pointing to hepatic abscess is also worthy of note. The diagrams well show the appearance of the amœbæ seen under $\frac{1}{12}$th objective oil immersion, and they were drawn, with the aid of a camera lucida, the exact size as seen under that power. The relative sizes of a pus corpuscle and red blood-corpuscles are also shown. I am indebted to my house physician, Dr. C. W. Windsor, for the history of the case, and I have to thank Mr. Hart, the dispenser at the Seamen's Hospital, for the trouble which he has taken in staining, mounting, and watching the amœbæ.

Wimpole-street, W.

CONTRACTED ELBOW, WRIST, AND FINGERS FOLLOWING PRESSURE ON MEDIAN NERVE BY SCAR TISSUE.

NERVE FREED BY OPERATION; SUBCUTANEOUS SECTION OF ALL THE FLEXOR TENDONS AT WRIST; COMPLETE RESTORATION OF FUNCTIONS OF THE HAND.[1]

BY A. H. TUBBY, M.S. LOND., F.R.C.S. ENG.,

ASSISTANT SURGEON TO THE WESTMINSTER HOSPITAL; SURGEON TO OUT-PATIENTS, EVELINA HOSPITAL FOR SICK CHILDREN, ETC.

THIS case is of considerable surgical interest on account of the cause of the contraction and its duration, the difficulty of finding the site of lesion of the nerve, and the extensive dissection required; but chiefly it is of value as showing that clean division of all the tendons on the flexor aspect of the wrist gives a satisfactory result, and that both flexion and extension of the fingers can be fully restored after so radical a procedure. The details of the case are as follows.

A girl aged four years was brought to me at the National Orthopædic Hospital on Oct. 20th, 1893, with the history that one year previously she injured the front of the right forearm. She was taken to the German Hospital; but beyond the fact that splints were applied and that subsequently some matter came from the forearm, no further details could be obtained. On examination the right elbow was found to be partially flexed, the forearm fully pronated and the wrist flexed, the thumb and first and second fingers were forcibly bent into the palm, and the third and fourth fingers less so. Sensation was impaired in the outer part of the palm and on the palmar aspect of the thumb and first and second fingers. There was, however, no glossiness of the skin and the nails were intact. On attempting passive movement it was found impossible to either supinate the forearm or extend the wrist, thumb, and first and second fingers, but the third and fourth fingers could be passively moved through an angle of about twenty degrees. About one inch below the bend of the elbow and in the middle line, at the anterior aspect of the forearm, a depressed scar half an inch in diameter was seen. It was somewhat firmly adherent to the deeper structures. Judging from the appearances presented by the limb I thought the history of the case might be somewhat as follows:—Injury to the upper end of the ulna, followed by suppuration and pressure either of a small amount of callus or scar-tissue on the median nerve just after it had passed through the two heads of the pronator radii teres. This idea received confirmation on writing to the German Hospital. In the reply to my letter the house surgeon kindly gave the following details. The patient was admitted on May 20th and left the hospital on June 12th, 1893. The history of the accident was that the child had received a blow on the anterior part of the forearm, which caused a fracture of the coronoid process of the ulna accompanied by considerable bruising. Suppuration had followed, and when the wound had healed the forearm was seen to be flexed and pronated, and the wrist could not be extended. The child was taken into the National Orthopædic Hospital, and for a month douching with hot and cold water, friction, passive movements, and galvanism were persevered in, but no improvement was noted. I then decided to operate, hoping to find the nerve lesion in the neighbourhood of the elbow-joint. I commenced my incision just above the bend of the elbow and in the centre of the flexor aspect, and carried it towards the hand for four inches. The median nerve was found at the bend of the elbow and traced downwards between the heads of the pronator radii teres until it disappeared beneath the flexor carpi radialis; but it was quite healthy in this region. The incision was then lengthened for two inches and a half, and the flexor carpi radialis cut through at its centre and the ends turned upwards and downwards. The opportunity so afforded was now taken to examine the anterior interosseous nerve in a part of its course, but that, too, was healthy. The median nerve was still further traced out and at two inches and a half above the wrist was found to enter a mass of dense scar tissue. When freed from this the nerve trunk was opaque in colour for an inch of its course and shrunken to half its natural extent. The scar tissue was carefully removed, the two portions of the flexor carpi radialis united by gut sutures, and the wound closed, a few threads of horsehair being left in the centre to serve as a drain. This drain was removed on the fourth day, when it was found that primary union had taken place. At the end of the tenth day all the sutures were taken out as the edges were firmly united. The results, two months afterwards, were that supination and extension were much increased, doubtless owing to division of the flexor carpi radialis at the operation, but the movements of the fingers and wrist were not much improved. It was, therefore, decided to divide the flexor tendons of the wrist. This I proceeded to do by prolonging the former incision to the junction of the forearm and hand, finding the median nerve, and passing a blunt-pointed tenotomy knife underneath it. I cut firmly downwards towards the bone, dividing every tendon which offered any opposition to extension of the fingers and thumb. I think that the palmaris longus, the flexor sublimis and profundus digitorum, and the flexor longus pollicis tendons were completely severed. No attempts were made either to bring the divided ends into apposition nor to unite the proximal to the proper distal parts. The hand and fingers were placed upon a malleable iron splint in the position they occupied before the second operation—that is, the wrist and fingers fully flexed. In ten days' time the splint was removed and the wound was found to be soundly healed. The forearm and hand were then placed in a gauntlet of plaster-of-Paris, with the wrist flexed and the fingers and thumb bandaged into the palm. At the expiration of ten weeks after the operation, gentle extension of the fingers and thumb was begun, and the movement gradually increased till full extension could be obtained. The child was sent out of the hospital wearing a plaster-of Paris gauntlet, which still kept the wrist flexed, but left the thumb and fingers free. At this time considerable active movement had returned to the hand. For a further period of six months the gauntlet was worn, the little patient coming up twice a week for friction and galvanism.

Result.—A year afterwards the movements of the right forearm and hand were completely restored and the parts were in good position. She could use a knife and a spoon well, write on a slate, and pick up small objects from the table, such as a pin.

Remarks.—The history and the position of the scar were particularly misleading in this case. The nerve lesion was found at a distance of three inches from the superficial scar. It appeared to me that considerable suppuration must have taken place in the forearm, the pus burrowing towards the hand and pocketing around the nerve. The spot where the latter was compressed was probably the farthest point of the pocket. It was the uncertainty at the time of operation as to the exact site of the nerve lesion which led to such an extensive dissection of the forearm; the large wound, however, healed perfectly. It might be questioned if it would not have been sufficient to have divided the flexor tendons in the first place without seeking for the point of pressure on the nerve. This in itself would have been an unsurgical proceeding, and it seems to me that no *active* flexion of the fingers could have been expected with the nerve pressed upon as it was by dense scar tissue. The complete restoration of active movement is a sufficient proof that the functions of the nerve were in abeyance owing to pressure. That more complete movement was not obtained after the first operation was, I take it, due to the adaptive shortening of muscles and tendons which followed the flexed position of the hand and fingers arising from irritation of the nerve. Mere freeing of the nerve was not

[1] Communicated to the British Orthopædic Society, Jan. 31st, 1895.

sufficient to correct this, although some immediate improvement resulted. With reference to the important question of section of the tendons of the wrist-joint, this example shows that it can be done with impunity, and even with success. Although no efforts were made to bring the severed ends into apposition, yet perfect union took place. One is aware how often it happens that if the tendons be severed by broken glass or any other accident non-union results. In this case the utmost care was taken to keep the wrist and fingers flexed for ten weeks after the second operation, so that by these means the uniting material became firm. Some experiments[2] I made on division of the tendo Achillis of rabbits convinced me of the necessity of great care in avoiding premature stretching of the uniting material of divided tendons. I have known it to continue to stretch for fourteen months after the date of operation. Therefore in this case the wrist was kept slightly flexed for a whole year after the second operation. To the fact, then, that the extensors were prevented from pulling upon the weak uniting material of the flexors at the wrist I ascribe in a large measure the complete restoration of the functions of the hand.

Finsbury-circus, E.C.

A CASE OF PSEUDO-HYPERTROPHIC PARALYSIS WITH THE KNEE-JERKS PRESERVED.

BY W. S. COLMAN, M.D., M.R.C.P. LOND.,

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THE following case of pseudo-hypertrophic paralysis presents several unusual features and seems of sufficient interest to be placed on record.

A boy aged ten years was brought to me at the Hospital for Sick Children, Great Ormond-street, on Dec. 29th, 1894, with the following history. He had been quite well and strong, and as forward as other children, till he was five years old, when it was noticed that he was "weak on his legs" and that his calves were unduly large. This weakness continued to increase, but very slowly—so slowly that he was active and could run, play football, &c.—until a year before he came under observation, when he had a severe attack of scarlet fever, and after this he became rapidly weaker, and his football performances were confined to keeping goal. The arms were now noticed to be getting weaker, so that he had difficulty in holding the brush when blacking his boots. He was born at the full term and was a perfectly healthy infant; he walked at sixteen months and could talk when two years old. Beyond the attack of scarlet fever mentioned above he never had any illnesses. His head was "funnily shaped" from birth. The family history revealed nothing important. A brother twelve years old had broken his left arm on two occasions and his right leg once, but presented no other signs of disease. On examination the patient was found to be a rather thin but active-looking boy. There was an obvious prominence on the forehead along the line of the frontal suture, and the skull presented a well-marked scaphoid shape. His intelligence and degree of education were fully up to the standard. He walked with an awkward and rather high-stepping gait. When his feet were off the ground they showed a well-marked "pes cavus" deformity, which disappeared when he stood erect. There was commencing slight contracture of the gastrocnemii on both sides. On examination of the muscles there was great enlargement with weakness of the gastrocnemii and of the vasti externi—the crureus and vastus internus being but little affected on each side. The glutei were very little enlarged. The muscles in front of the leg were little affected. An electrical examination showed over-excitability of the gastrocnemii and vasti externi to stimulation by a faradaic current, a current too weak to produce contraction in a healthy child at once causing a contraction in these muscles, and the reaction was greater on the left side, on which the hypertrophy was also most marked. The reaction of the other muscles to the faradaic current was normal. To the constant current all muscles responded normally. In the upper limb there was considerable weakness of movements about the shoulder. The deltoids and triceps were enlarged, and notably the infra-spinati on each side. There was some wasting of the biceps, pectorales, latissimus dorsi, and of the muscles of the thumb. The muscles all responded readily to both forms of electrical stimulation. Sensation to all forms of stimuli was normal in all parts. The knee-jerks when he was first seen were extremely active, but after he had been under observation six weeks they became much more moderate. Ankle clonus was not elicited at any time. During the last few months he has had slight difficulty in controlling micturition, and had wetted the bed on several occasions. He had retained control over the sphincter ani, but had to obey any calls very promptly, any hot drink producing a rather loose action of the bowels almost immediately. In all other respects he appeared to be quite healthy.

The chief points of interest are the small number of muscles affected although the disease had been recognised for five years, the retention of the knee-jerks, and the electrical reactions. The preservation of the knee-jerks at so late a period of the disease is so unusual a condition that I have been unable to meet with any recorded case. In this case there seem two possible explanations. The first—to which I incline—is that it was owing to the fact that, although the vastus externus was extremely enlarged, no change could be observed in the vastus internus, whose electrical reactions also corresponded to those of unaffected muscles. It has been shown by Professor Sherrington[1] that the vastus internus is the essential muscle for the production of the knee-jerk. The nerves to the other constituents of the quadriceps may be cut in an animal, but if the nerve to the vastus internus is uninjured the knee-jerk will be elicited as before. In the case of my patient I attribute the retention of the jerk to the escape of the vastus internus, and expect that as soon as that muscle becomes invaded the knee-jerk will disappear. The other possible alternative is that there may be some coexistent gross spinal cord disease; but of this not the slightest evidence could be discovered except the very doubtful evidence from the weakness of the sphincter muscles. The curious over-excitability of the enlarged muscles to faradaism is a phenomenon that I have observed before in at least one case of pseudo-hypertrophic paralysis, and presumably is due to an abnormal excitability of unaffected fibres in the muscle, and may indicate some change in the muscle fibres immediately preceding the atrophic process.

Wimpole-street, W.

[2] Guy's Hospital Reports, 1891.

[1] Journal of Physiology, vol. xiii.

A CASE OF PULSATING EXOPHTHALMOS.

BY ADOLPH BRONNER, M.D.,

SURGEON TO THE BRADFORD EYE AND EAR HOSPITAL, AND LARYNGOLOGIST TO THE BRADFORD INFIRMARY.

THE patient, a married woman aged thirty-six years, saw me on Oct. 23rd, 1894. For five weeks she had had severe "neuralgic pains" in the right side of the head, more marked near the temple. Four weeks ago (one week after the commencement of the pains) she heard a pulsating noise in the right side of the head, accompanied by severe throbbing pains; and she had also noticed that the right eye had become prominent. The pain, noises, and protrusion of the eye were at first very slight and had gradually become worse up to one week before I saw her. During the last week they had remained stationary. When she was excited or bent the head the noises and protrusion became more marked. The patient was a pale, weakly woman and looked fifty years old. The right upper lid drooped, was swollen and tense, with thick veins, and covered the eyeball. The lid could not be lifted up. A thick fold of dark-red conjunctiva protruded between the lids and was larger on the inner side. The lower lid was also swollen. The eyeball protruded forwards and outwards, was divergent, and could not be moved. No pulsation of the eyeball could be seen or felt when the patient was quiet. As soon as the head was bent a slight pulsation was noticed. The eyeball could be pressed back into the orbit to some extent. The conjunctiva bulbi was thick and red and contained many dark veins which converged towards the cornea. On the inner side of the eye there was a soft tumour which seemed to press

the eye forwards and outwards. The iris was slightly discoloured; the pupil was large and acted very slowly to light. There was a slight deposit of semi-transparent lymph on the anterior capsule of the lens. The fundus was slightly hazy. The veins were extremely swollen and dark, with peculiar constrictions, which gave the appearance of a string of sausages. The disc was slightly congested and the edges slightly blurred. Vision = $\frac{6}{60}$. There was pulsation of the retinal veins. A loud, intermittent, blowing noise could be heard with the stethoscope on the whole of the right side of the head, being most marked over the orbit and temple. On pressure on the internal carotid the noises nearly ceased. The patient was kept in bed for some days. The pain slightly decreased, but otherwise there was no improvement. On Nov. 6th the internal carotid was tied. The noises at once ceased; there has been no pain since. The exophthalmos

gradually decreased, and the patient made an uninterrupted recovery. She was kept in bed for three weeks. For the first few days there was slight pain on swallowing. Peculiar constant whistling noises were heard for four weeks in the right ear. On Jan. 15th, 1895, the vision was $\frac{6}{12}$. There was very slight swelling of the upper lid, and no exophthalmos. The movements of the eye were normal, except for some slight difficulty in turning the eye outwards. The retinal veins were still much swollen and rather dark. The disc was normal.

This is undoubtedly a case of so-called pulsating exophthalmos, and caused by anastomosis of the internal carotid and the cavernous sinus. These cases, of non-traumatic origin, are more common in women and between the ages of thirty-five and forty-five. There are several rather interesting points in this case to which I will briefly refer. 1. There was no history of a blow or fall, no confinement or serious illness, and no arterio-sclerosis or heart disease. 2. There was intense pain for seven days before the noise was heard or the eye began to protrude. The pain was evidently caused by an aneurysm of the internal carotid, which increased in size for seven days and then broke into the cavernous sinus. 3. The communication must have been at first small and gradually become larger, as the protrusion of the eyeball increased for three weeks, and as there was no history of a sudden violent pain or sudden intense noise. 4. The vision was fairly good; there was no marked papillitis. This proves that there must have been a free anastomosis between the central retinal vein and the inferior ophthalmic veins. 5. There was no pulsation except when the patient bent the head. This is the second case of pulsating exophthalmos which has come under my notice; the first case is recorded in the Transactions of the Ophthalmological Society, vol. ix.

Bradford.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF EMPYEMA OCCURRING IN A VERY YOUNG CHILD.

BY MALCOLM MACKINTOSH, M.D. GLASG.

THE child in question was a female aged four weeks and four days who was found dead in bed beside its mother at an early hour on the morning of April 5th last. The parents are healthy, and the baby, who was born at full term after an easy confinement, showed no sign of anything abnormal. It was fed at the breast and never had any difficulty in taking its food easily and naturally. The mother noticed nothing worthy of remark until the evening before the child died, when she observed that it gasped several times in a way that she had not noticed before; but on referring to the nurse she was told that in all probability it was due to "wind," and the matter was allowed to drop. Post mortem the brain and abdominal organs were found to be free from disease, but on opening the thorax the cause of death was soon discovered. The left pleural cavity was full of pus, and the lung was represented by a small hard mass situated at the posterior part of the chest, which seemed to me never to have expanded at all. The amount of pus present was about eight ounces. It is a very interesting question as to whether the disease was present before birth or was a subsequent development.

Sister's-avenue, Clapham-common.

A CASE OF SPERMATOCELE.

BY T. W. CARMALT JONES, F.R.C.S. EDIN.,

SURGEON TO THE CENTRAL LONDON THROAT AND EAR HOSPITAL.

ON Dec. 14th, 1894, a man consulted me about a swelling connected with his left testicle. He was twenty-four years of age, and the swelling was first noticed when he was thirteen or fourteen. There was a feeling of weight and some pain, especially at night, and in bed the feeling of weight worried him. He had worn a truss for double inguinal hernia since the age of seven constantly. The swelling did not interfere with cycling, rowing, or wrestling, but he always wore a suspender. He had not gone in for gymnastics. There was no history of a blow, though he used to play football. On examination there was a tense sausage-shaped swelling, apparently in the left cord, projecting for about an inch above the testicle, with a smooth rounded upper end; lower down the swelling became indistinct at the back of the testicle, but below and behind there was again a smooth round-ended swelling projecting below and behind the testicle. No sense of fluctuation could be made out as the tumours were so tense; but on percussion the impulse was distinctly conveyed from one end to the other. The scrotal skin was very thick, and I could not see any light through the tumour. I diagnosed either an old hydrocele or a hæmatocele, and advised tapping. On Dec. 16th I drew off two ounces and a half of opaque, milky-looking fluid with a yellow tinge; it looked exactly like egg and milk, but on standing the yellow colour disappeared and the fluid became slightly brown. After the tapping the whole swelling disappeared alike above, behind, and below the testicle. The

fluid was sent to Mr. Wyatt Wingrave for examination, and his report was as follows: "Report upon a specimen of fluid received from Mr. Carmalt Jones, Dec. 18th, 1894.—Quantity: two ounces and a half. Colour: café-au-lait, opaque. Reaction: alkaline. Specific gravity, 1032. Odour: faint; stale fish. Microscopic: (1) spermatozoa (dead), about 5000 in 1 c.mm.; (2) large nucleated round cells undergoing fatty degeneration; (3) fatty spheres about 3 μ to 15 μ in diameter; (4) granular pigmented spheres 10 μ to 40 μ in diameter; (5) small irregular granular masses 2 μ to 5 μ in diameter. Organic matter: fat in abundance, hæmatin, serum albumen, and nucleo-albumen. Inorganic: chiefly phosphates and chlorides. Coagulation could not be induced except by heating. There were no crystals of either cholesterin, spermin, or hæmatin. On extraction with ether some free cholesterin crystals were obtained. The fluid is evidently derived from a cyst connected with the testicle which has formed some association with the blood. Judging from the presence of pigment, it has been gradual in formation." The last time I saw the patient was on Jan. 16th, 1895. I could find no signs of refilling in the cyst; there was a great deal of thickening about the cord and testicle; he had had no pain, the sense of weight had entirely disappeared, and he had not worn a suspender for more than a week.

Sherborne-lane, E.C.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

A CASE OF STRANGULATION OF THE VERMIFORM APPENDIX IN AN INFANT SIX WEEKS OLD; REMOVAL OF THE VERMIFORM APPENDIX, WHICH WAS SUPPURATING; RECOVERY; REMARKS.

(Under the care of Mr. BILTON POLLARD.)

HERNIA of the appendix vermiformis has been observed both in the inguinal and femoral varieties of hernia—reducible, incarcerated and irreducible, and strangulated. Brieger[1] collected 41 cases of this form of hernia; 20 were inguinal, 15 femoral, and as regarded 6 the variety was not stated. In 6 the appendix was normal. Operation was performed in 26 cases, 16 being cured, 2 cured with fæcal fistula following, and 5 died; in 3 the result was unknown. In the earlier cases the result of operation was not so favourable as in the more recent, probably because the condition is now better known, although sometimes very hard to diagnose, and the appropriate treatment adopted. Drs. Bull and Coley[2] give 6 additional cases in children—2 strangulated, 3 irreducible, and 1 reducible; 1 strangulated and 1 irreducible case died, the patient in the former case being only eight weeks old and almost moribund at the time of operation. The symptoms in strangulation of the appendix vary somewhat extensively, both as regards duration and severity. In a case of strangulation in a femoral sac described by Bayer[3] they had commenced eighteen days before admission, and were chiefly local swelling and radiating pain; in another case there was constipation with some degree of prostration, but no vomiting. These are what may be called the dangerous cases, as on account of the absence of urgent symptoms the patients or their friends refuse operation until local or general peritonitis or perforation of the appendix has ensued. The length of the appendix varies from one inch to nine inches and a half, and it is not surprising that it is not sometimes found in the sac of a hernia in children, for its development in them is occasionally unexpectedly out of proportion to that of the adult, whilst its mobility may allow it to slip about. For the notes of this case we are indebted to Mr. Douglas Drew, surgical registrar.

A male infant aged six weeks was admitted on Jan. 22nd on account of an inflamed, irreducible swelling which occupied the right groin and the right side of the scrotum. The latter had been enlarged since birth. The mother first noticed it when the child was fourteen days old. She pushed the lump up and it disappeared at once. On Jan. 19th the lump appeared again. It was larger than before, and the child became very restless. On the 20th the mother gave it a dose of castor oil, which acted freely the same day. It vomited after the castor oil, the swelling became much larger and harder, and the skin became red. In the evening of the same day the child was brought to the hospital and hot fomentations were applied. On the following day an attempt was made to reduce the swelling under chloroform. Something was felt to go back, but there was no slip or gurgle, and the swelling was not visibly reduced in size. The child vomited once during the day, and the bowels acted twice. Next day (the 22nd) it was, as stated above, admitted. The skin of the right side of the scrotum was red and œdematous. The right inguinal canal and the right side of the scrotum were occupied by a hard and very tender swelling, which was irreducible. Mr. Pollard operated. The tissues were thickened and inflamed. The tunica vaginalis contained a little fluid, and both it and the testicle were inflamed. The vermiform appendix occupied the funicular portion of the sac. It was red, and its middle third was considerably enlarged. A ligature was applied on the proximal side of the swelling. A circular incision was then made round the upper part of the appendix. Only the serous and muscular coats were divided. These were then retracted from the central mucous tube, and the latter was tied with a fine silk ligature at the highest point exposed. The mucous membrane was then divided below the ligature and the appendix was removed. The serous and muscular coats, being released, projected well beyond the ligature. They were inverted by three Lembert's sutures, which were tied over the end of the stump. A second series of Lembert's sutures were inserted, and as they were tied the central tube of mucous membrane was displaced upwards into the cæcum. The stump of the vermiform appendix was reduced into the abdomen, the neck of the hernial sac was ligatured and divided, and the operation was completed in the usual manner, the wound being entirely closed. The child's temperature rose after the operation to 101·6° F. It fell to normal on the following day and continued so afterwards. The wound healed by first intention and the child was discharged on the eighteenth day after the operation. The parts removed at the operation consisted of one inch and a half of the vermiform appendix. At a distance of half an inch from its tip there was an oval fluctuating swelling measuring half an inch in length and containing pus, which lay altogether external to the mucous membrane. The latter was thinned by ulceration opposite the abscess.

Remarks by Mr. POLLARD.—Strangulation of the vermiform appendix is rarely observed. In December, 1890, when operating for the radical cure of a right inguinal hernia, I found the vermiform appendix adherent to the back of the sac and was obliged to excise it preparatorily to ligaturing the neck of the sac. In this case there were severe local signs of strangulated hernia, but the absence of intestinal obstruction seemed to negative the idea that the hernial swelling was composed of intestine. I have met with two cases of strangulated hernia of the ovary which were diagnosed by the local signs of severe strangulation being unaccompanied by intestinal obstruction. Such a diagnosis was in this case out of the question owing to the sex of the child. Strangulation of omentum was a possible explanation of the appearances, but the rapid development and the severity of the local signs of strangulation were opposed to that view. The true explanation was only discovered at the operation. The method of removing the appendix which was employed in this case and in the earlier one already referred to appears to be worthy of remark. The appendix is sometimes simply ligatured and excised—indeed, the possibility of inverting the stump of the appendix and closing it with Lembert's sutures has been denied. It is, I believe, almost impossible to invert the mucous coat, but the serous and muscular coats are very movable and can be readily turned in over the central mucous tube, which is simply displaced upwards as the sutures are tied. By performing a sort of circular amputation and dividing the mucous coat at a higher level than the sero-muscular, as was done in these cases, the inversion of the latter layer and the apposition of serous membrane to serous membrane are

[1] Sajous' Annual of the Universal Medical Sciences, 1894, vol. iii., p. 23. [2] Ibid.
[3] Centralblatt für Chirurgie, 1876, p. 689.

facilitated. The abscess which was found between the coats of the appendix was apparently dependent on the strangulation and the taxis to which it had been subjected, for the canal of the appendix contained neither pus nor a concretion.

GENERAL HOSPITAL, NOTTINGHAM.

A CASE OF TUMOUR OF THE CORPORA QUADRIGEMINA; NECROPSY; REMARKS.

(Under the care of Dr. W. B. RANSOM.)

THE published cases of tumour of the corpora quadrigemina in which careful and accurate observation has been made are far from numerous, and this case is important, not only from the point of view of diagnosis of such growths, but also from that of treatment. Of course, from the surgical treatment nothing more was expected than a possible relief of some of the pressure symptoms by draining off cerebro-spinal fluid; but although the attempt was only partially successful it would appear to be fully justified by what occurred in a case described by Nothnagel.[1] In that case there were symptoms of tumour of the quadrigeminal bodies after a fall on the head, and after death a small glioma the size of a hazel-nut was found partly on and partly in the corpora quadrigemina; the ventricles of the brain were much distended. For some time before death cerebro-spinal fluid frequently escaped from the nose, a large quantity being often collected. When the flow was interrupted signs of cerebral compression occurred, stronger nystagmus, increase of reflexes, slower pulse, and involuntary escape of urine and fæces. After death, which occurred from coma, it was found that the escape of fluid had occurred through the perineural space of the olfactory nerves, which were atrophied. Sachs,[2] Thistle and Caven,[2] Pawinski,[3] Tissier,[4] and Guthrie and Turner [5] have described tumours of this region in recent years.

A youth aged nineteen years was admitted into the General Hospital, Nottingham, on Jan. 27th, 1894, on account of headache and strabismus. The patient dated his illness from an attack of "influenza" in the second week in December, 1893. After Christmas he resumed work for a week, but had then to stop because of pain in the head and the small of the back. About this time he noticed the strabismus, for which he consulted an ophthalmic surgeon. The head pain had gradually increased; it affected chiefly the temples and forehead, but had occasionally shot to the occipital region. There had been also some gnawing pain in the eyes, especially the left, and the sight of that eye had deteriorated. During the last week he had frequently vomited. There was no history of syphilis. On Jan. 23th the patient's mental condition and speech seemed normal, but he said his memory was not quite what it had been. He was pale and thin, but rather puffy about the eyes. There was slight drooping of both upper lids, more on the left, but both could be raised. There was a constant slight clonic movement of the upper lids, and with each lowering of the lids the eyeballs jerked inwards. The left eye deviated strongly inwards, and when he was told to look to the left this inward deviation was increased. The right deviated inwards to a less extent, and could be moved outwards nearly to the middle line. He could look downwards, but when he tried to look up the eyes turned inwards and very slightly upwards. The pupils were of medium size, the right slightly the larger. Both reacted sluggishly to light and accommodation. There was no facial paralysis. The muscles of the mouth and cheek moved normally; he could shut the eyes tightly and could wrinkle the forehead. The tongue did not deviate and was not wasted. The patient walked fairly well, though the feet were kept wide apart. There was no tendency to fall in any particular direction. Romberg's symptom was absent. The upper limbs presented no paresis, incoördination, or tremor. The knee-jerks and ankle-clonus were not obtained. The plantar, cremasteric, and abdominal reflexes were present, but not exaggerated. The patient complained of severe cutting pain in the forehead and temples, preventing sleep, and of some pain at the nape of the neck. There was some general cranial tenderness, most marked over the eyes. Smell, hearing, and taste were normal. Vision was very defective. The patient could just read large print with the right eye, but with the left could not do this or count fingers. With the left eye he only just saw an object intercepting the light. Ophthalmoscopic examination showed a considerable pink effusion mottled with white spots over each optic disc. There was no other retinal change. There was no alteration in general sensation on the head, trunk, or limbs. In especial there was no sign of disease of the fifth nerve. He vomited frequently, usually after, but sometimes apart from, food. There was slight nausea. The abdomen was normal. The heart, lungs, generative organs, skin, muscles, and osseous system showed no sign of disease. The specific gravity of the urine was 1014; it contained no albumen or sugar, and no excess of phosphates. On Feb. 4th the headache continued to be intense. The gait was more staggering, the feet were kept wide apart, and the patient tended to fall to the right. There was slight weakness of the muscles of the left angle of the mouth. The clonic spasm of the eyelids and eyes had ceased. On the night of Feb. 9th the patient had a peculiar attack. He suddenly called out that his head was bad, and the nurse then found him with retracted head, very pale, and unable to speak, though he pointed to his throat. He did not seem to have lost consciousness, and there was no spasm of the arms or legs. The attack passed away in ten minutes, but he was very depressed and in great pain for some hours after it. During the last few days the patient had been much more dizzy when up, and could with difficulty walk alone, always tending to fall and to revolve to the right. On Feb. 10th the range of movement of the eyes was diminishing. The knee-jerks were still absent. On Feb. 13th the patient could not walk without support. For the last few days the vision had been gradually failing, so that now with either eye he could not do more than tell when a hand was held between him and the light. The pupils were of medium size, though once or twice they had been rather large, and reacted to light. The headache continued with great severity, and, although the patient's intellect seemed fairly clear, he was becoming very cross and sulky. The temperature since admission had been normal. The pulse had varied from 70 to 90. On Feb. 14th, as a result of a consultation, Mr. Joseph Thompson trephined over the left lobe of the cerebellum with a view of relieving intra-cranial pressure. When the dura mater was incised the cerebellum bulged prominently through the opening. A small drainage-tube was inserted. During Feb. 15th, 16th, and 17th there had been a very copious flow of cerebro-spinal fluid from the trephine hole. The patient had been free from pain, and for the first twenty-four hours after the operation seemed better, but afterwards he gradually became drowsy, then passed into a gradually deepening coma, and died on the afternoon of the 17th. The temperature rose to 103° F. on this day.

Necropsy.—On exposing the trephine wound a hernia cerebelli was found, the bulging portion of the cerebellum being inflamed and soft. On further examination a recent slight meningitis was found spreading from this point to the base of the brain. The rest of the cerebellum was normal. The convexity of the cerebral hemispheres showed no change beyond some engorgement of veins. On making horizontal sections of the hemispheres a patch of soft substance dotted with hæmorrhages was found in the roof of the hinder part of the left lateral ventricle, extending slightly to its outer side and inferiorly continuous with a mass of white growth in the posterior half of the left optic thalamus. The posterior corpora quadrigemina were enlarged, the left more than the right, and consisted of a similar white growth dotted with red which was continuous with that in the thalamus. The anterior corpora quadrigemina were small and almost obliterated. The pons itself was normal. The pineal gland was normal. There was no growth at the base of the skull. Microscopical examination of the growth in the corpora quadrigemina showed it to be a large oval-celled sarcoma.

Remarks by Dr. RANSOM.—In this case we have besides the ordinary signs of cerebral tumour—headache, vomiting, and optic neuritis—the further features of ophthalmoplegia and an unsteady, reeling gait—i.e., the two signs laid down by Nothnagel as pathognomonic of tumour of the corpora quadrigemina. The case differs from some in the fact that the ophthalmoplegia was well developed long before marked ataxy set in. In the earlier stage the diagnosis between growth from the base of the skull, of the corpora quadrigemina or pineal gland, and of the cerebellum was not certain. The loss of knee-jerks and paralysis of the sixth nerves might be explained by the hypothesis of cerebellar

[1] Sajous' Annual of the Universal Medical Sciences, 1889, vol. ii., A 30.
[2] Ibid., 1891, vol. ii., A 26.
[3] Ibid., 1892, vol. ii., A 35.
[4] Ibid., 1894, vol. ii., A 24.
[5] THE LANCET, Feb. 2nd, 1895.

tumour pressing on the pons; while the paralysis of separate branches of the third and of the fourth nerve was compatible with a lesion involving them as they pass through the dura mater. Neither of these views, however, accounted for the clonic spasm of the upper lid and internal rectus, while it was not likely that a growth of the base of the skull large enough to cause such intense general symptoms would leave the internal and inferior recti and the nerves to the pupils intact. When the ataxy, barely observable at first, became fully developed the diagnosis of disease of the corpora quadrigemina became more probable. The marked interference with vision in this case is unusual, as in most cases such loss has been slight or very late in appearing. It cannot in this case have been due to implication of the optic thalamus or optic radiations, for it involved firstly and chiefly the left eye. There was never any hemianopia. It is possible that the optic neuritis may have caused it; but, on the other hand, one frequently sees a similar amount of effusion with little or no loss of visual power. The escape of the cells and fibres controlling the pupils and the slight affection of the internal recti are points of interest in connexion with the statements of Hensen and Völckers as to the arrangement of centres on the floor of the aqueduct of Sylvius. These, the most anterior of the separate centres into which the nuclei of the third nerve are divisible, naturally escape injury from a lesion of the posterior corpora quadrigemina, while the centres for the upper lid, superior rectus, and external rectus are damaged. The paresis of the oral fibres of the left facial nerve and not of those to the orbicularis oculi is remarkable, considering the extent to which the third nucleus was injured. Mendel's view of the origin of the orbicular fibres of the seventh from the nucleus of the third would lead one to expect that these would suffer before the fibres to the mouth.

GENERAL HOSPITAL, SINGAPORE.

STRANGULATED DIAPHRAGMATIC HERNIA; NECROPSY; REMARKS.

(Under the care of Mr. A. J. MCCLOSKY.)

PATIENTS who are suffering from a diaphragmatic or phrenic hernia do not often reach adult age; the large majority of congenital hernias of the kind described were found when necropsies were being made on children. The various ways in which they form are as follows: (1) as a consequence of weakening of the diaphragm in some part, permitting of the protrusion of some of the abdominal contents into the chest; (2) protrusion through a congenital opening in the diaphragm; (3) through one of the natural apertures; and (4) through an opening which has formed as the immediate or remote result of a wound or laceration of muscle. The protrusion is usually on the left side of the body, the presence of the liver being sufficient as a rule to protect the right side. We have, however, published in THE LANCET[1] a case of hernia on the right side, and mentioned others by Dr. Cornell, Dr. Hillier, and Dr. Murchison. The signs presented on the side of the chest into which the hernia has escaped are much like those of pneumothorax and may be mistaken for it; sometimes there is dulness on percussion in consequence of effusion or the presence of some of the solid viscera.

A woman aged twenty-two years was brought to the hospital on July 27th, 1894, complaining of vomiting, inability to swallow even liquids, and pain in the left side of the chest and back. The duration of her illness was only two days. She was the mother of two children, the last one being born six years ago. Her bowels were constipated. She had complete œsophageal obstruction, not being able to swallow even liquids. Liquids simply passed down the œsophagus for a certain distance and then welled up without any effort on the part of the patient. She was a well-nourished subject, and had always enjoyed good health. There was no history of injury, and the patient could assign no cause for her illness. She bore an anxious countenance, as of impending death; her body was cold and clammy, and the pulse rapid, small, and thready. The patient was in such a desperate condition—"doubled up," restless, and tossing about on the cot—that a thorough physical examination was almost impossible. She rapidly sank and died six hours after admission into hospital. At the necropsy a diaphragmatic hernia was discovered at the most common site for such herniæ—viz., on the left side. The herniated organs consisted of the stomach, the first part of the duodenum, omentum, spleen, and a few coils of the small intestine. The orifice was situated on the left side of the diaphragm close to its lateral posterior attachments to the ligamenta arcuata; it was circular in shape, smooth-edged, and of such a size as to admit the passage of five fingers. The stomach was "doubled up" upon itself, the greater curvature being uppermost in the left pleural cavity, and looking externally; while that portion of the stomach immediately adjacent to the cardiac end, between the œsophageal opening and hernial orifice, could be seen, tense and shining like a bladder, protruding on the abdominal side of the diaphragm. The pylorus with the first part of the duodenum was low down close to the orifice; the lesser curvature was directed inwards. The spleen lay behind and external to the stomach, against the pleural surface of the diaphragm, while immediately within the orifice were a few coils of the small intestine. The stomach was considerably dilated and presented numerous hæmorrhagic spots on its peritoneal surface; it contained a large quantity of dark-red bloody fluid, with partially digested food substance and shreds of mucus. The mucous membrane was acutely congested and eroded at parts, but not gangrenous. The heart was displaced considerably to the right, not extending to the left beyond the left lateral border of the sternum. The left lung was totally collapsed and pushed upwards against the clavicle, occupying only the supra- and infra-clavicular regions. The bowels were practically empty, the lumen contracted, and the walls atrophied; the mucous membrane presented a normal appearance.

Remarks by Mr. MCCLOSKY.—I am of opinion that the orifice in the diaphragm was a congenital malformation because of its situation, its smooth and even margin, its circular shape, absence of any adhesions, and absence of any history of injury or signs of any fracture of ribs.

[1] THE LANCET, May 16th, 1891: case described by Dr. W. A. Hollis.

Medical Societies.

CLINICAL SOCIETY OF LONDON.

Abdominal Section for Intestinal Obstruction caused by Volvulus of the Sigmoid Flexure.—Early Erasion in Inflammation of the Sacro-iliac Joint.—Orchotomy for Enlargement of Prostate.—Large Intra-thoracic Cystic Goitre causing Dyspnœa and treated by Operation.

AN ordinary meeting of this society was held on April 26th, Mr. LANGTON, Acting President, being in the chair.

Dr. LUCAS BENHAM and Mr. SILCOCK related a case of Acute Intestinal Obstruction due to Volvulus of the Sigmoid Flexure. The patient was a female aged fifty-six years who had been affected with chronic mania and partial dementia for more than twenty years as the result of sunstroke in India some time before. She suffered from habitual constipation, which required the administration of simple aperients. She was thin, spare, and somewhat cachectic looking, but usually in fair health. The illness commenced with constipation, which was not relieved by the usual aperients. Sickness followed and became frequent and violent, the vomited matter containing some "coffee-grounds" material, but was not stercoraceous. She was first seen two days after the earliest symptoms appeared, and by that time the abdomen was greatly distended, vomiting occurring after every attempt to swallow. No obstruction could be felt per rectum, and no relief could be obtained by copious enemata &c. On the following day, therefore, the abdomen was opened, under chloroform, and the whole of the colon was found enormously distended, the seat of obstruction being, as was anticipated, in the sigmoid flexure, where the intestine was twisted a half-turn on itself, forming a volvulus. This was reduced. There was no peritonitis. The wound was closed and dressed antiseptically. There was immediate and great relief from the operation. No sickness or distension of the abdomen followed. A large quantity of fæces came away naturally. Slight pyrexia ensued, which lasted for ten days, but there was little other constitutional disturbance except a very dry brown tongue, which Dr. Benham was disposed to ascribe to the iodoform with which the wound was dressed. The last stitches were removed ten days after the operation, and the wound had completely healed a few days later. In a month from the date of the operation the patient was up and

about, looking as well as usual. This case was deemed worthy of record, as so few similar successful ones had been as yet reported—viz., only nine in all, and of these only one had occurred in this country. Besides these complete successes a few had also been recorded in which volvulus had been either temporarily or partially relieved by abdominal section.—Mr. PEARCE GOULD said that this subject had been introduced at a previous meeting by Dr. Herringham and Mr. Bruce Clarke. At that meeting he described one case and since then he had met with a second. The patient was a man aged forty years and of weak intellect, who had at one time been in an asylum. The pulse was not rapid and the temperature was normal, but the abdomen was tense and tenesmus was considerable; there was a little sickness. Nothing could be felt through the abdominal wall or per rectum. There was a history of gradual loss of flesh and strength for twelve months. He made a small incision as for inguinal colotomy and found a distended sigmoid flexure lying vertically along the middle line. He opened again in the middle line, and as he could not return the sigmoid flexure he incised it and let out much gas and fæcal matter. As the torsion of the gut seemed to be recurrent he fixed it to the abdominal wall. Next day he tried to close the fistula, as the bowels had acted normally, but there was still an escape of fæces.—Mr. GOLDING-BIRD said that the interest of the case lay in the fact that the volvulus did not return, as was usually the case. Could the readers of the paper suggest why this had not happened?—Dr. GLOVER remarked on the fact that both the cases referred to had been of unsound mind. He had seen a third case of a similar kind in consultation, and that also was in an asylum.—Mr. LANGTON said that he dealt with a case of volvulus two years ago. The patient, a female, presented a history of intestinal obstruction of gradual onset. She was so ill when he operated that he made an artificial anus. She recovered from the operation, but died two years later from influenza. It was a valuable procedure in these cases to empty the distended gut by incision.—Mr. ARBUTHNOT LANE said he had dealt with a case of this sort which was under the care of Dr. Hale White and himself. The patient died a few days after the operation from perforation of a stercoral ulcer in the portion of the sigmoid flexure which had been distended. The proper treatment in these cases was undoubtedly to resect the whole sigmoid flexure and fasten the descending colon to the rectum.—Dr. BENHAM, in reply, said that the bowels were kept empty after the operation, and to this he attributed the absence of return of volvulus.—Mr. SILCOCK, in reply, mentioned the case of a man between sixty and seventy years of age who was under Mr. Norton's care at St. Mary's Hospital, and for whom he suggested the opening of the sigmoid flexure and the free evacuation of the intestinal contents. Three days after operation the abdominal wall became gangrenous, apparently from division of the epigastric artery, for there was no peritonitis. Recurrence in these cases was generally due to the fact that the bowels were not emptied.

Mr. GOLDING BIRD read a paper on Early Erasion in Inflammation of the Sacro-iliac Joint. He detailed cases in which in an early stage of tuberculous disease he had operated upon the sacro-iliac joint, and the method he advanced was an elaboration of one he had employed in a single case fifteen years ago. Its object was, by removal of the iliac surface of the joint, to permit of its thorough exploration and cleansing. The special points upon which he laid stress were as follows: the importance of early recognition of sacro-iliac inflammation (and he insisted upon the value of pain elicited by pressure over the root of the posterior inferior iliac spine); early operation, as in any other tuberculous joints; not to wait for local objective signs; and especially not to wait until disorganisation had proceeded to the formation of sinuses. Sinuses were useless as routes to follow in operating, but deliberate removal of the ilium from the posterior inferior iliac spine upwards and forwards over the whole area of the joint was insisted upon. The after-treatment was very simple, and appeared from his cases to be short, an adult patient being able to walk about and bear his weight on the joint by the eighth week.—Mr. CROFT was glad that the theory of early interference in joint disease, of which he had so long been an advocate, had been brought to bear upon sacro-iliac disease, which used to be looked upon as hopeless to deal with surgically, and the patients affected with it were relegated to rest for an indefinite time. They thus often passed through several years of suffering and were unable to carry on their usual occupations. It was occasionally difficult to establish a diagnosis. In several cases pressure upon the wings of the os innominatum was not sufficient to elicit pain except when the anterior superior spinous processes were pressed towards each other. He had often found it difficult to elicit pain by pressure directly over the region of the joint, and in this he differed from Mr. Golding-Bird. He had not given up splints in the treatment of these cases, but the principle seemed a sound one.—Mr. GOLDING-BIRD, in reply, said that he would adopt splints during the expectant treatment of these cases, but not after operation.

Mr. MANSELL MOULLIN read a paper on two cases in which Orchotomy was performed for Enlargement of the Prostate. The first case was that of a man seventy-four years of age under the care of Mr. Birch of Lower Clapton. The prostate was of enormous size, the urine ammoniacal, and the bladder so contracted from persistent cystitis that it could only hold two ounces of fluid. There was intense strangury; a portable urinal had to be worn constantly, and the patient had to rise fourteen or fifteen times every night, the longest spell of sleep being three-quarters of an hour, in spite of the frequent use of morphia suppositories. Ten days after the operation the patient had dispensed with morphia and could sleep sometimes for an hour and a half. The prostate, as felt per rectum, was decidedly smaller. The stream of urine was larger. The reaction was neutral, and small masses of phosphates were beginning to come away. One month later the urine was acid; masses of phosphates were still coming away, and more could be felt. The strangury had almost gone, and there was only a faint cloud of mucus. The bladder could hold four ounces of urine and was much less sensitive when a catheter was passed, and the general condition of the patient had improved immensely; instead of going rapidly downhill he was gaining ground. The second case was that of an enormously stout man under the care of Mr. Houchin of Stepney. The prostate was exceedingly large, the bladder capacious, and the urine at the time acid with only a little albumen, but there had been repeated attacks of cystitis and hæmaturia; the patient had to use a catheter every hour, day and night, and no urine had been passed spontaneously for upwards of fifteen months. The patient bore the operation well, and everything progressed favourably for a week; then he was seized with extreme dyspnœa, from which he rallied for a time, but the attack returned again and again, with hæmaturia and profuse diarrhœa, and death ensued on the eleventh day. On the two days before death bloodstained urine was passed spontaneously by the penis on several occasions. At the necropsy the heart was found to be soft and fatty, the kidneys (one especially) were cirrhotic, and all the abdominal thoracic organs were loaded with fat. The bladder contained calculus, which had been concealed behind the prostate, and some bloodstained urine. Its walls were deeply congested and ulcerated in places. The prostate, which was uniformly enlarged, was very soft and flabby, and the forefinger could be passed easily down the prostatic urethra. An outgrowth from the prostate that projected upwards into the bladder showed unmistakable signs in its consistence and shape, and in being covered over with wrinkled mucous membrane, of its having undergone a recent diminution in size. It was pointed out that although one of these cases proved fatal and in the other the success, though quite as great as could be expected from what was known beforehand of the condition of the bladder, was not nearly so great as that of Mr. Mansell Moullin's former case, of which an account was given at the last meeting of the British Medical Association, they both of them bore testimony to the fact that enlargement of the prostate, no matter how great it was, disappeared within a very short time after orchotomy had been performed. It was urged that sufficient evidence had been brought forward to justify the assurance being given to those who were suffering from the effects of this disease that if the operation were performed the enlargement would disappear, and unless it had been already hopelessly ruined by cystitis and catheterisation the bladder would recover its power. Mr. Mansell Moullin advocated the use of the word "orchotomy" in preference both to castration and to "orchectomy," which had been suggested in America as being the natural derivative from the Greek, ὀρχοτομεῖν, to castrate.—Mr. LANGTON said that years ago he operated on a man aged sixty-eight years who had an enlarged prostate and acute senile tuberculous disease of the testis on the right side. He performed castration on that side and noticed that this was followed by diminution in size of the corresponding side of the prostate. Later the left testis became also affected

with tuberculous disease, and it was also removed; the prostate then completely shrank. The patient was at present alive and in good health.—Mr. GOLDING-BIRD said that it was of immense importance to publish all cases of castration, in view of the correspondence which had recently taken place on this subject, and observations were required as to whether removal of one testis was followed by diminution of the prostate on the corresponding side. He objected to the term "orchotomy" and thought that if any departure from castration were required the term "orchectomy" might be used.—Mr. PEARCE GOULD said that the year before last he removed the right testis of a man for tuberculous disease; there was no appreciable shrinking of the prostate after that operation. During the present year the other testis had become tuberculous and was also removed. There was a great shrinking of the prostate after the second removal.—Mr. MANSELL MOULLIN, in reply, said that he believed that though the removal of one testicle would have no effect on a prostate of normal size, yet an enlarged prostate would undergo unilateral shrinking.

Mr. BOWLBY related a case of large Intra-thoracic Cystic Goitre causing Dyspnœa which was treated by operation. The patient was a woman aged thirty-four years. She had noticed a small swelling in the episternal notch for about two years, and had suffered for the same time from slight shortness of breath. During the few months preceding her admission into St. Bartholomew's Hospital the difficulty of breathing had increased, and she had suffered from attacks of transient but severe dyspnœa. The attack from which she was suffering on admission had followed exposure to cold and wet and was accompanied by nasal catarrh and bronchitis. The swelling in the neck had also increased in size. The patient was found to be suffering from very severe dyspnœa with recession of the chest walls and cyanosis. Her respirations were rapid and her temperature 103° F. An examination of the neck showed very little external swelling to account for such serious symptoms. There was some fulness in the episternal notch, and the thyroid gland felt a little enlarged. When the patient coughed, however, the swelling increased in a most extraordinary manner, and a large rounded mass was suddenly extruded from the chest into the neck and as suddenly disappeared. The way in which the tumour was projected reminded one very much of a sudden protrusion of a large hernia during coughing. The tumour moved very slightly on deglutition. An examination of the chest revealed a large area of dulness behind the sternum and cartilages of the first three ribs and continuous with the area of cardiac dulness. There were loud mucous râles in the trachea and bronchi. The diagnosis was intra-thoracic goitre, and an operation was performed as soon as possible. An incision in the middle line showed that the growth was cystic and attached to the left lobe of the thyroid. The trachea was next opened on account of the cessation of respiration, and the cyst was incised. It contained more than a pint of clear fluid, and when emptied was found to have compressed the trachea backwards and thrust itself between the apices of the lungs. Its walls were very thin and reflected over the large vessels, so that on looking into the cyst the aorta, the innominate, and the carotid vessels were easily distinguished, as was also the base of the heart, on which the cyst rested. The thyroid gland was otherwise not enlarged or diseased, but had been displaced a little by the tumour. The patient made a rapid recovery, and the wound healed in three weeks. When last seen, after an interval of several months, there was no re-collection of the fluid in the cyst.—Mr. GOLDING-BIRD asked why comparatively small unilateral enlargements of the thyroid gland were so frequently accompanied by dyspnœa. He believed that this symptom in many cases was functional. On one occasion, after opening a substernal abscess, he had felt the arch of the aorta.—Mr. BOWLBY, in reply, said that in the case related the cyst had become impacted behind the sternum, and therefore the dyspnœa had an obvious cause.

EPIDEMIOLOGICAL SOCIETY OF LONDON.

Immunity.

A MEETING of this society was held on April 19th, Mr. SHIRLEY F. MURPHY, President, being in the chair.

Dr. J. W. WASHBOURN read a paper on Immunity, which was, he pointed out, a problem of the deepest scientific interest, and of no less practical importance because the antitoxin treatment of diphtheria, probably the first step towards an entirely new field of therapeutics, was the direct outcome of the close study of its phenomena. The first fact to be taken into consideration was that pathogenic bacteria produced their effects on the organism by means of poisons or "toxines" which they elaborated in the fluids of the body, as was well seen in the production of all the symptoms of diphtheria or of tetanus by the inoculation of sterilised culture fluids, without a trace of the bacilli themselves. These toxines were intensely virulent, but others, as that of the pneumococcus, were extremely feeble. The bacilli of diphtheria and tetanus when inoculated did not invade the vascular system, but multiplied in and around the seat of inoculation only, though the toxines they produced were diffused throughout the body. These might be taken as types of toxic diseases; though in the case of tetanus the inoculation of washed spores into a healthy wound produced no effect unless the tissues were lacerated or suppurating, or other bacteria were introduced at the same time and place. In septic diseases, on the other hand, the toxines were feeble, but the bacteria invaded every tissue and fluid of the organism. This was well seen in the study of the coccus of pneumonia in the rabbit. Some, as septicæmic, partook of the character of both, and some acted in one way or the other under different circumstances. We must consider the power of the body to destroy the bacteria or inhibit their growth, and the power of resisting the effects of their toxines, the former factor being most important in the case of the septic and the latter in that of the toxic diseases. Immunity might depend on either condition or on both. It was either natural or artificial and acquired. Fowls, pigs, and white rats were immune to anthrax; birds generally to the pneumococcus; mice to the toxine of diphtheria; and fowls to that of tetanus, just as they were to large doses of morphine. They would, however, succumb to anthrax if depressed by cold and ill fed. An artificial immunity might be acquired in several ways, as by inoculation with a mild or artificially attenuated virus, or by minute doses of a virulent one, or by non-fatal doses of the pure toxine. Anthrax virus could be attenuated by cultivation at a high temperature or by the addition of certain antiseptics. As a rule, immunity obtained by means of the toxines was less permanent than that from inoculation of living microbes. Time was required to establish immunity by means of toxines and such immunity did not last long, both periods being longer the greater the effect of the inoculation. It was easier to render an animal immune to fatal doses of the living bacteria than to those of the toxine; and when this latter immunity was obtained that to the bacteria was also, but the converse did not hold good. A fallacy of observation might, however, arise from the fact that living bacteria were often retained in the tissues long after apparent recovery and called into renewed activity by the injection of toxine, they and not it being the cause of the subsequent fatal attack. In some few cases a very transient immunity had been produced by the intra-peritoneal injection of dead bacteria &c. But of infinitely greater value was that conferred by injection of the serum of a highly immunised animal. The immunity was of far shorter duration than that produced by vaccination, but this method had a therapeutic as well as or even greater than its prophylactic, and unlike vaccinations was available after the disease had developed. This was the antitoxin treatment of diphtheria and tetanus. Turning to the properties of the cells and fluids of the body in their relation to bacteria, Dr. Washbourn referred to phagocytosis as the most seductive theory of immunity. To Metschnikoff, who had studied the process throughout the animal kingdom, we owed all our knowledge of the subject. The amœba, as was well known, was capable of surrounding and digesting particles of food, including living bacteria. Among these Metschnikoff had observed a small unicellular micro-organism, the microsphæra, which, however, instead of being digested multiplied within the amœba and ultimately destroyed it. Such a struggle between the invading microbes and the protoplasmic cells of the body occurred, according to Metschnikoff, in every case of infection, ending in recovery or in death as the cells or the microbes were victorious. The struggle and the alternative results were well seen in the Daphnia, a small freshwater crustacean, and the parasitic Monospora, which entered the tissues from the alimentary canal, and in a large number of the invertebrata phagocytsis played an important part. Among vertebrata the phagocytes belonged mostly to the class of leucocytes, which Metschnikoff divided into lymphocytes, eosinophile, neutrophile, and

mononuclear leucocytes. Of these, the two latter, together with the endothelial cells of the lymphatics and kidneys, were phagocytic, even when removed from the body, and that they were capable of thus devouring bacteria in the living animal was easily proved by experiments such as the introduction of anthrax bacilli under the skin of a pigeon or of those of tubercle into the blood of a rabbit, when they would be found to be taken up by the leucocytes and by the endothelium respectively, and successful cultures from such leucocytes showed that the bacteria might resist digestion for some time. The migration of leucocytes through the walls of the vessels in inflammation around the seat of an inoculation was due to a power possessed by various substances of attracting or of repelling amœboid cells, and known as positive and negative chemiotaxis. It could be studied in certain protozoa, as the myxomycetes, and in the vertebrata by inserting under the skin capillary tubes open at one end and containing chemical substances. On removing the tubes after some days the contents, if positively chemiotaxic, will be filled with leucocytes. That the blood and lymph serum had bactericidal powers was first observed by Nuttell, and carefully investigated by Buchner, Behring, and others. If serum were inoculated with a cultivation, and the number of bacteria present estimated day after day by plate cultures, it was found that they gradually fell off until they disappeared altogether, or after having sunk in number for a time began to increase until they were more numerous than at first. It had been suggested that the serum contained a bactericidal substance called "alexine," and that the bacteria secreted an antagonistic "lysine"; both were hypothetical, but the fact remained that bacteria, if numerous, could resist the undoubtedly bactericidal action of the blood, which was also very easily destroyed by physical agencies such as the exposure of the serum to a temperature of 60°C. The bactericidal property was most conspicuous in inflammatory exudations and was doubtless due to some substance secreted by the leucocytes, among which Hankin first indicated the eosinophile cells as the most active. But the serum was not merely bactericidal; it could be made antitoxic. Behring and Kitasato were the first to show that the serum of animals immunised by inoculation to the poison of diphtheria or tetanus possessed the power when inoculated into others infected with the respective diseases of neutralising the poison and cutting short the morbid process; and the more frequently the immunised animal was injected with the toxine the more powerfully antitoxic its blood became. Ehrlich had shown that two vegetable poisons, ricine and librine, acted in a strictly analogous manner. Serums were thus antibacteric or antitoxic, the latter being antibacteric also. The bactericidal property of a serum was very easily destroyed by heat, but the antitoxic or protective property was not, and the substance in which it resided could not be precipitated without losing its efficacy. It was scarcely necessary to state that all antitoxins were specific or efficient against no toxine but that of the disease whence they were derived. Such were the factors in immunity—viz., phagocytosis, bactericidal substances and protecive serums, the last of these being outside of the question of natural immunity. Yet the problem of natural immunity was a complex one, special factors coming in; thus the low temperature of the frog's blood enabled it to resist inoculation with tubercle bacilli, and fowls were unaffected by tetanine as they were by morphine. The blood serum of white rats destroyed anthrax bacilli even out of the body, but their resistance to the action of the pneumococcus could not thus be explained. All such cases Metschnikoff would refer to phagocytosis, but marked phagocytosis might occur and death yet follow; indeed, in the case of rabbits infected with anthrax the bacilli had been seen to escape from the interior of the phagocytes and multiply in the fluids. Again, in the exudation around the seat of inoculations many of the leucocytes were not phagocytes and the exudation serum might be a powerful bactericide. Both agencies were involved in the resistance offered to infection and phagocytosis, very rarely alone. The problem of acquired immunity was further complicated by the introduction of a new and artificial factor—the protective power of the serum. An antitoxin, as that of diphtheria or tetanus, neutralised the paralysing action of the toxine on the cells, allowing phagocytosis to have full play; for the serum of immunised animals had no bactericidal properties, and the spores of tetanus, if washed free from any trace of toxine and introduced into the body of a susceptible animal, were speedily ingested and destroyed by the phagocytes. Immunity acquired towards the septic diseases was even more obscure and complex, so that, pending the results of experiments which might throw light on the subject, it was better to refrain from conjecture.

HARVEIAN SOCIETY OF LONDON.

Syncopal Bradycardia.

A MEETING of this society was held on April 18th, Dr. WILLIAM HILL, Vice-President, being in the chair.

Dr. ALEXANDER MORISON read a paper on Syncopal Bradycardia. After referring to the literature of the subject he treated it under the following heads: 1. Endocardial bradycardia, in which the chief factor was increased endocardiac blood pressure. This bradycardia of overstrain, occurring at all ages, was illustrated by cases. 2. Myocardial bradycardia, due to fatty or fibrotic degeneration of the myocardium, or to changes assumed to exist in the intrinsic neural mechanism of the heart. Cases illustrating this condition in its presyncopal and syncopal phases were given, and sphygmograms taken from a case under Dr. Morison's observation were shown. 3. Exocardial bradycardia or that due (*a*) to reflex and transient nerve irritation, especially in the pneumogastric territory; (*b*) to poisons, such as digitalis, opium, and chloroform—well-marked pulsus bigeminus caused by digitalis in a case of double mitral disease was illustrated by sphygmograms; (*c*) to constitutional and extra-cardial diseases, such as rheumatism, syphilis, and meningitis. 4. Compound bradycardia or cases in which various factors played a part difficult to apportion aright. 5. Doubtful cases, in which well-marked clinical bradycardia could not be ascertained after death to have rested upon a discoverable cause. The etiology of the subject was next considered, and Dr. Morison showed that bradycardia could not be associated exclusively with most anatomical changes, either in the heart or neighbouring organs, because such were much more frequently attended by cardiac acceleration. He ascribed a preponderant *rôle* to the influence of the cardiac nervous system, the power of which to modify the heart's action rhythmically and arhythmically was illustrated by several sphymograms. He laid especial emphasis on the important fact, noted by Dehio as well as by himself and others, that cardiac accelerants had little appreciable effect upon the heart in persistent bradycardia. He showed that this failure to accelerate applied to belladonna, trinitrin, and alcohol alike, as well as to such movements, locomotor or pyrexial, as under normal circumstances quicken the heart. Dr. Morison closed his remarks with references to the diagnosis, prognosis, and treatment of these cases, and quoted two instances, one recorded by Flint, which showed that persistent cardial bradycardia might result in recovery, and another mentioned by Tripier, in which iodide of potassium cured a persistent case due to syphilis.

Dr. William Hill, Mr. Peyton Beale, Dr. Cagney, and Dr. Basil Morison took part in the subsequent discussion, and Dr. Alexander Morison replied.

MIDLAND MEDICAL SOCIETY.

Intra-peritoneal Hæmorrhage.—Exhibition of Cases and Specimens.

A MEETING of the above society was held on April 24th at the Birmingham Medical Institute, the President, Mr. T. F. CHAVASSE, being in the chair.

Dr. THOMAS NELSON showed a patient with a large Nævus between the thumb and forefinger, about the size of an orange, with a small division extending through between the metacarpal bones of the index and second fingers. It has been slowly growing for twelve years and does not cause any inconvenience.

Mr. F. MARSH showed a girl aged nineteen years whom he had Trephined on March 2nd, 1894, for Epilepsy which had developed after a fall on to the forehead ten years ago. There was a depressed scar about an inch above the left eyebrow. On removing a disc of bone beneath this a small perforation was found in the bone through which the dura mater had protruded and become adherent to the scalp tissues. This was severed and the bone was reimplanted. Primary union took place, and there had been no recurrence

of the fits, although thirteen months had elapsed since the operation.

Mr. F. MARSH also showed a boy aged thirteen years whom he had Trephined on Oct. 5th, 1894, for Headache and Vertigo on slight exertion. About nine years ago the boy fell and struck his forehead against a kerb-stone and had suffered much from headache since. The pain commenced at the site of a slightly depressed scar two inches above the right eyebrow and radiated over the head. A disc of bone was elevated at this spot, but no depression of the internal table was found. The dura mater was, however, adherent. The adhesions were separated and the bone was reimplanted. A rapid recovery was made, and there had not been any recurrence of the symptoms.

Mr. E. LUKE FREER showed a new Spinal Apparatus.

Mr. C. MARTIN showed a cheap and efficient Apparatus for the Sterilisation of Instruments.

Mr. JOHN W. TAYLOR read a paper on Intra-peritoneal Hæmorrhage the result of Tubal Pregnancy. The paper dealt first with diffuse hæmorrhage from rupture of the tube, its features, recognition, and treatment, and secondly with localised intra-peritoneal hæmatocele, its causation, consequences, and varieties. The views of Professor Sänger of Leipzig and of the writer regarding "encapsulated" or "solitary" hæmatocele were discussed, and some critical remarks on the general subject of intra-peritoneal hæmatocele concluded the paper.

Reviews and Notices of Books.

Lehrbuch der Allgemeinen und Speciellen Pathologischen Anatomie fur Aerzte und Studirende. Von Dr. ERNST ZIEGLER, Professor der Pathologie, Anatomie, und der Allgemeinen Pathologie an der Universität Freiburg. Achte, neu bearbeite Auflage. Erster Band: Allgemeine Pathologie. Jena: Verlag von Gustav Fischer. 1895. (*Text book of General and Special Pathological Anatomy, for Practitioners and Students.* By Dr. ERNST ZIEGLER, Professor of Pathological Anatomy and of General Pathology at the University of Freiburg. Eighth Edition. Vol. I. General Pathology. Jena: Gustav Fischer. 1895.)

THE welcome originally accorded to Professor Ziegler's "Lehrbuch" has been more than justified by the rapidity with which new editions have been called for. Indeed, it is no exaggeration to say that this work marked the opening of a new epoch in the study of pathology, and that it from the first set a high standard of excellence. Its merits were manifold, but above all others may be cited the clearness of literary description and the wealth of admirable illustrations which it displayed. It had succeeded to the favourite text-book of Professor Förster, but in originality and power it left that work far behind. Nevertheless, in these days of scientific progress no text-book can hope to retain a hold on the favour of the student which fails to keep abreast with the increasing knowledge of the times. The author, fully cognisant of this fact, has in each succeeding edition amended and added so much that practically the book has assumed a new form without in the least diminishing its popularity. The enormous strides with which bacteriology has advanced and the problems which surround it have not escaped his notice, and the result is that the first volume has grown considerably in dimensions and in value. Professor Ziegler has with this eighth edition made a new departure in giving it the wider title of "General Pathology," instead of that of "General Pathological Anatomy," which it formerly held. Forming now a bulky volume of upwards of 700 pages, and illustrated by 458 figures, some of which are coloured, and all of which are remarkable for their delicacy and fidelity, it constitutes the best compendium extant of the science. In his prefatory remarks the author justifies his extensive revision, rightly maintaining that the work of greatest utility is not that of a condensed manual, which can only give results and conclusions, but that in which each topic is treated fully and with due explanation. He recognises that the aim of pathology is to give a clear insight into the processes of disease and to be of practical value at the bedside, and in the book before us he has certainly spared no pains to expound principles and describe the facts on which these are based. The introduction of a section devoted to the causes of disease and of chapters dealing with fever, immunity, and other general questions, has become a necessity, whilst the discussion of inflammation and the vital processes connected with it has been considerably expanded and modified. In the chapter on tumours we have one of the most complete and rational descriptions of the histological characters of these formations. Disorders of development and malformations are also most amply illustrated. But the crown of the work lies in the thoroughly systematised and accurate details of the parasitic affections which form so large a part of infective disease. The utility of the work is enhanced by the ample bibliography appended to each section, and to our thinking the book is one which is quite indispensable to the advanced student of pathology. This is the more evident since it may be truly said to occupy a unique position among text-books.

Elementary Practical Bacteriology, including Bacteriological Analysis and Chemistry. By A. A. KANTHACK, M.D., M.R.C.P., Lecturer on Pathology and Bacteriology, St. Bartholomew's Hospital; and J. H. DRYSDALE, M.B., M.R.C.P., Casualty Physician, St. Bartholomew's Hospital. London: Macmillan and Co. 1895.

THIS is one of the best of the practical handbooks for laboratory instruction that we have met with. Dealing with a difficult and complicated subject, it leads the beginner, by extremely well devised and clear instructions, through all the methods most in vogue, not merely for cultivating and staining micro-organisms, but also for observing the modifications in their life-history effected by temperature, amount of sunlight, the presence or absence of oxygen, and so on. In another section full directions are given for the examination of air, water, and food, as well as for testing the efficiency of filters. In the third section the student is taken through the methods employed for separating the toxines, albumoses, &c., which result from the chemical changes set up by the agency of the various organisms, such as the bacillus diphtheriæ and the ptomaines which result from the putrefaction of proteid matter. The methods employed throughout are described in clear and definite language, and the various steps are given in praiseworthy detail. Many practical handbooks are rendered useless by the directions being too condensed, the writer assuming that the reader is familiar with the details of laboratory work. This defect has been avoided by the authors, who have managed, nevertheless, to keep the book in small compass by omitting all padding. The book is written for those who are attending a course in a well-equipped laboratory, and for such it can hardly be improved upon; but there are many practitioners, both here and in the colonies, who have not had the advantage of laboratory instruction in their student days, but who have taken up the study of bacteriology, and we hope that in future editions the authors will see their way to increasing the usefulness of their work by a short introduction on apparatus, and an appendix on the best method of obtaining pure cultures of the various materials which they prescribe for use in the different lessons.

Directions for Laboratory Work in Bacteriology. By FREDERICK G. NOVY, Sc.D., M.D. Michigan: George Wahr. 1894.

THIS is essentially a laboratory handbook, and has been arranged so that it may be made to serve both as an instruction book and as a note-book, in which drawings and

such additional notes as may be desirable may be made. It is essential in such a book that the teaching should be didactic, and in some cases even dogmatic. The course for which this is a text-book is supposed to extend over twelve weeks, instruction being given daily; and certainly anyone who devotes this amount of time to the subject and carefully follows out the directions given will have acquired a knowledge of the technique and of the elementary facts of bacteriology that will place him in a position to continue the study of the subject and to carry on original investigation. The instructions are in many cases far from complete, but this arises presumably from the fact that the author intended the work simply to serve as a skeleton text-book, the gaps in which are to be filled up from time to time and as individual necessity arises. The book, therefore, in the hands of a student under a good teacher may prove invaluable, but it can scarcely be looked to for much help in clearing up the many difficulties that constantly arise in the laboratory. The lessons are progressive, but two subjects are usually carried on side by side; thus, to begin with, classification and life-history are considered side by side with the preparation of nutrient media and general bacteriological technique. Then follow descriptions of various typical micro-organisms, all of which are carefully drawn up, followed by the various methods in which their study is carried on. The latter part of the book is devoted to what is described as special work—i.e., preparation of tissues, cutting and staining of sections, and the preparation of these sections for the examination of various pathogenic micro-organisms. The testing of disinfectants is then taken up, and at the end is given a very complete list of apparatus and accessories. The work, as a whole, may be recommended as a good laboratory text-book, especially when supplemented by oral teaching.

Illustrated Lectures on Ambulance Work. By R. LAWTON ROBERTS. Fifth Edition. London: H. K. Lewis.

THAT this book has reached a fifth edition so few years after the date of its first appearance is good evidence of its popularity and of its meeting a want. It consists of a course of five lectures and an appendix. In the first lecture the aims of the St. John Ambulance Association are described, the necessity of universal instruction in "first aid" is urged, and a general description of the structure and functions of the human body is given. The uses of the triangular bandage and the application of first field dressings are also described. The second lecture treats of bleeding, the third lecture of broken bones, the fourth lecture deals with sudden attacks of illness, and the fifth lecture with the methods of lifting and carrying the sick and injured. The appendix contains much advantageous information and many useful instructions. The lectures strike us as being too long, and we think the book more suitable to lecturers than to those seeking instruction, who will, moreover, find all that is essential in Shepherd's "First Aid to the Injured"—the well-known little manual issued by the St. John Ambulance Association. The book is copiously illustrated; those illustrations which deal with hæmorrhage and the application of tourniquets are particularly good. Surely it was unnecessary to give a special illustration to depict the well-known "safety pin." In the preface to this addition useful statistics of the work of the St. John Ambulance Association are set forth, and reference is made to the appointments of Surgeon-Major Hutton as "Organising Commissioner" to the Association and of Colonel Thackeray, V.C., as Commissioner of the St. John Ambulance Brigade. The work done by another body, "The Invalid Transport Corps," is also brought into prominence. The fifth section contains fifteen pages on Military Ambulance Organisation, an able summary of a very interesting subject, and one likely to do something towards "educating public opinion" to the needs so often pointed out by Brigade-Surgeon-Lieutenant-Colonel Evatt and other officers of the Army Medical Staff.

Outlines of Zoology. By E. J. ARTHUR THOMSON, M.A., F.R.S.E., Lecturer on Zoology in the School of Medicine, Edinburgh. Second edition, revised and enlarged, pp. 820, with 266 illustrations. Edinburgh and London: Young J. Pentland. 1892.

THE new edition of this excellent treatise, which is one of Young J. Pentland's students' manuals, has been considerably enlarged, for not only have 180 pages been added, but much space has been gained by relegating details to smaller type. The whole work has undergone systematic revision, facts recently observed being inserted and pains having been taken to make the meaning clearer where there was previously any obscurity. The first chapter, giving a general survey of the animal kingdom, has been rewritten, and the second chapter, on Comparative Physiology, has been added by Miss Marion Newbigin, B.Sc., who, the author states in his preface, has assisted him throughout in the preparation of this edition. A conscientious revision of each chapter appears to have been made, and many new paragraphs and sections have been introduced—such, for example, as those dealing with the development of clepsine, the development of the crustacea generally, and the disposition of the vertebral column in the fish, frog, lizard, and bird; the description of a lizard, of a snake, and so on—all of these being intercalated with the accounts given in the first edition. Many additional illustrations are given. Some improvement might still be made in this direction. For example, the statements made under the head of the nervous system in lizards, that "the brain consists of the usual parts," and under the same head in ophidia that "the brain presents no remarkable peculiarities," supply no information to the student. A good diagram showing the parts would be of much assistance.

In our notice of the work on a former occasion we drew attention to its excellence as a manual of instruction for those preparing for the higher examinations, and it may now be regarded as one of the most reliable at the disposal of the student.

Transactions of the Royal Academy of Medicine in Ireland. Vol. XII. Edited by WILLIAM THOMSON, M.A., F.R.C.S. Dublin: Fannin and Co.; London: Baillière, Tindall, and Cox.

THIS volume contains selected papers read before the various sections of the Royal Academy of Medicine in Ireland, many of them being of much interest. Appended to the text of each paper is a report of the discussion which ensued, a feature which adds to the value of the volume. Of the papers contributed to the Section of Medicine we note one on Pernicious Anæmia by Dr. James Craig, who gives an impartial summary of the growth of knowledge on this obscure subject. He points out that arsenic is not always beneficial, and thinks that the recommendation of Dr. Wm. Hunter to employ intestinal antiseptics is one which might be followed with advantage from what is known of the character of the disease. Mr. J. J. Burgess writes upon Malignant Endocarditis, the case upon which his paper is based being one of great obscurity in a pregnant woman. Abortion occurred during the illness, the course of which was marked by irregular pyrexia, marked nervous symptoms, and finally cerebral embolism. There is a remarkable record of a case of Associated Paralysis of the Portio Dura and Pneumogastric Nerves by Dr. J. W. Moore, apparently depending upon suppuration in the sphenoidal sinus; the patient recovered. The subject of Graves' Disease and its points of contrast with Myxœdema are discussed by Dr. James Craig. There is

also a paper on Tetany by Dr. A. R. Parsons, besides others on Influenza, Cancrum Oris in Typhoid Fever, &c. In the Section of Surgery Mr. F. Alcock Nixon describes a case of Removal of a Tumour of the Brain, and details the several plans suggested for cranial topography by Professors Thane, Reid, and Fraser, the last being in his opinion the most reliable. Mr. T. Miles gives with much clearness the grounds for a resort to Laminectomy in Spinal Injuries, and Dr. Kendal Franks records a remarkable case of Fibrous Stricture of the Œsophagus treated by gastrotomy and dilatation from below according to Loreta's method. Mr. J. S. McArdle writes upon Nephrorrhaphy and Nephrectomy. He incidentally mentions that he is not inclined to concur in the opinion expressed by some that nephrectomy is of no use in renal sarcoma. The same surgeon contributes to the Section of Obstetrics a paper on the Operative Treatment of such Hernia as appear the result of Congenital Defect of Linea Alba, or as the outcome of Laparotomy. In the Section of Pathology there is an exposition of the current doctrines on Immunity in a paper by Dr. J. A. Scott, and also a description of a case of Locomotor Ataxy with Charcot's Disease. A series of plates illustrative of points in the development and morphology of the central nervous system are explained by Dr. Alec Fraser; they formed part of a demonstration given at one of the meetings of the section, and constitute a distinct feature of an instructive and valuable volume.

LIBRARY TABLE.

The Hospital Service Book and Supplement: Short Services for Use in the Wards of Hospitals and Infirmaries. By the Rev. CHARLES PARKHURST BAXTER, M.A. London: Henry Frowde. 1895.—This is the second edition of a useful abbreviation of the Daily and Communion Services of the Book of Common Prayer, together with a selection of favourite hymns. The supplement is mainly for children's use, and contains also a shortened form of the Ministration of Private Baptism. Prefixed are recommendatory letters from the Bishop of London and the Bishop of Southwark (Suffragan of Rochester).

National Viands à la Mode. By M. de ...ls. London: Longmans, Green, and Co.—This little book has been written with the laudable desire of giving English housewives the chance of reproducing in their own homes dishes they may have met with abroad. The recipes have been selected from many countries and offer a pleasant change from the ordinary British solid and uninteresting meal. We must advert unfavourably on the want of accuracy in these recipes. No doubt a sensible cook, aided by a mistress who has seen and eaten of the dishes in question, will do very well; but the average servant is notoriously wanting in common sense, and in many of the recipes no quantities are specified. In the Persian recipes, for instance, it would have been better to say, "Take three pounds of lean mutton," instead of "Take the meat of a leg of mutton." An English leg of mutton weighs anything between 6 lbs. and 25 lbs. However, we doubt not that the book will be useful if used with the limitations we have specified.

Clinical Lectures on the Prevention of Consumption. By WILLIAM MURRELL, M.D., F.R.C.P. London: Baillière and Co.—These lectures were delivered last year at the Westminster Hospital and published in the medical press. They form a simply-written and practical statement of a most important subject, and may be profitably read in conjunction with Dr. Ransome's paper entitled "The Consumption Scare," upon which we commented in a leading article on Feb. 2nd, 1895. Notification, Dr. Murrell considers, is at present impossible, but he lays stress on legislative action as regards public hygiene in reference to phthisis, and on personal efforts for guarding against the dissemination of infectious matter.

The Phonographic Record of Clinical Teaching and Medical Science. No. 5. London: Sir I. Pitman and Sons.—Both as regards the quality and quantity of matter which it contains the present number of the *Record*—a double one—is by far the best that has yet been issued. Dr. James Ritchie contributes a paper on the Therapeutical Pathology of Diphtheria which is a remarkably lucid account of a subject very much in evidence just now. Actinomycosis forms the subject of a clinical lecture by Mr. Edward Ward, who has found potassium iodide productive of good results in its treatment. Mr. E. Nettleship supplies an interesting clinical note on Blinding by Electric Light, and there is a useful note on Belladonna Poisoning by Mr. Raymond Johnson. Dr. Julius Dreschfeld and Mr. R. J. Godlee also contribute to the same number.

La Pratique de la Sérotherapie. By Dr. H. GILLET. Paris: J. B. Baillière et Fils. 1895.—This books gives an account of the treatment of diphtheria by the methods of serum therapeutics, intubation, and tracheotomy. The account of the serum treatment is the most interesting part of the book, and its history, modes of preparation, administration, and effects are all made clear, and the explanation is aided by several diagrams and temperature charts. Very full statistics are given, which mostly tend to show the advantages of the serum treatment, but at the same time all sides of the subject are dealt with, and we find a chapter which deals with all the objections—real or supposed—which have been urged against this method of treatment. The chapters on intubation and tracheotomy give accounts of the histories and methods of performing the operations, together with some comparative statistics. The book is very clearly printed and contains numerous illustrations.

New Inventions.

A NEW FORM OF UTERINE DILATOR.

I WISH to draw attention to a new form of uterine dilator that Messrs. Down Brothers have made for me with great care, and which in my own hands and those of my friends has proved a very useful instrument. Briefly, the construction is as follows. Each dilator is seven inches in length, is made of metal electro-plated, and is hollow and conical. They are a variety of Hegar's dilators, and the sizes are on Hegar's scale; but, unlike his instruments, which are too numerous, advance in complete sizes, and are not so certainly kept clean as a metal instrument. Mine are conical, each dilator covering three sizes Hegar in the first inch and a half and a fourth size in the next inch. My No. 1 starts at 3 Hegar and ends at 6 Hegar, within two inches and a half of the point. No. 2 runs from 4 to 7 Hegar. My last, No. 16, from 19 to 22 Hegar, a size large enough for most purposes. No. 1 is not too large to start with, and when one dilator has passed the next is easily received and used. Messrs. Down have at my request stocked this form of dilator with a slight curve, to meet the predilections of most gynæcologists; but the set I use are perfectly straight, and I have never had the slightest difficulty with them even in cases where I most feared it, and never any of that trouble which one often experiences with the larger size Hegar, which, advancing in complete sizes, is sometimes refused by the cervix.

My apology for troubling you must be that the difficulty I had in finding a dilator reasonably cheap, convenient, and useful for immediate dilatation must have been felt by others whom the usual uterine dilators do not satisfy. I hope the instrument here described will prove of service to such.

G. A. HAWKINS-AMBLER, F.R.C.S. Ed.

THE LANCET.

LONDON: SATURDAY, MAY 4, 1895.

WE have already succinctly set forth most of the results at which the Royal Commission on Opium has arrived.[1] In the opinion of many no necessity had, in reality, been shown for any such inquiry at all, but we think the Government of this country and India are to be congratulated on the fact that it has taken place and that the matter has been fully and impartially considered. We may fairly hope, now that it has been disposed of to the satisfaction of all candid people, that the result will be final, or that, at any rate, it will not come again within "the range of practical politics" for a very long time. The evidence adduced carried conviction to eight out of the nine members forming the Commission—even Mr. A. PEASE, who is supposed to have started with an opposite bias, having been converted. It may be taken as settled that the use of opium in India is extensively common and is attended with a remarkably small amount of injury; that the drug is regarded as a sort of domestic comfort; and that it is practically quite harmless as compared with the use and abuse of alcohol in other countries. There are, of course, cases in which the abuse of opium leads to disastrous consequences, but these are comparatively very rare. The habit of opium-eating in India does not appear to obtain such mastery over a man's nature and to be attended with such an amount of crime and lamentably degrading results as intemperate habits in regard to alcohol do elsewhere; and the prohibition of the use of opium is not only uncalled for, but is, moreover, impracticable and would lead to infinitely greater mischief if it were followed, as it in all probability would be, by the introduction and increased consumption of alcohol among the natives of India. It must be within the knowledge of a large number of medical officers, who have served or are now serving in India, how commonly opium is used in some native regiments; but how very few indeed of those medical officers have ever witnessed any of those evil effects which the anti-opium fadists declare to be so common, and of which they have drawn such graphic and terrible but imaginary pictures.

Sir WILLIAM ROBERTS, M.D., F.R.S., has set forth his views on the general features and the medical aspects of the question in a separate memorandum annexed to the official report of the Commission. This memorandum will be read with much interest. Sir WILLIAM ROBERTS alludes to the fact, to which we adverted in our article on the report of the Commission in THE LANCET of last week, that the use of opium is only one manifestation of a practice common to all human communities. Articles are consumed for their stimulating, restorative, or soothing qualities, and not because they possess nutritive properties or are articles of food. That the needs and requirements of life create a craving for such articles is abundantly shown by the habits and practices of different races and nations. Opium takes a position intermediate between alcohol and tobacco; but the habitual and excessive use of alcohol is followed by special organic changes that can be traced both during life and after death, and this is not the case with either opium or tobacco. Sir WILLIAM ROBERTS thinks that the number of opium-eaters in India is likely to be under- rather than over-estimated; that the opium habit is widely disseminated all over India; and that, as it may be practised for years without exciting suspicion, the estimates given of the ratio of opium-eaters to population must be taken with great reserve. He dwells upon the greater tolerance for opium among the natives of India as compared with Europeans, and cites the evidence of Surgeon-Lieutenant-Colonel CROMBIE as regards the very different effect of opium on native and English infants in support of the view that this enhanced tolerance on the part of the native of India is apparently congenital. Many of our Anglo-Indian readers will possibly recall here the chapter "Baby in Partibus" in that interesting little book, "Twenty-one Days in India," by the late GEORGE ABERIGH-MACKAY, in which the effect of opium surreptitiously administered by the ayah in charge of a European infant is pathetically sketched. Sir WILLIAM ROBERTS cites some illustrations of the large quantities of opium occasionally consumed, but he says that the average tolerance of natives of India, judging from the practice of opium-eaters, appears to range from four to twelve grains of opium per day. There are several interesting points that have yet to be investigated in regard to the use and the natural or acquired tolerance of opium on the part of the natives of India. We have heard that on field service—in such expeditions as, for instance, that for the relief of Chitral at the present time—the Mahomedan troops use opium with much apparent benefit under conditions involving great wear and tear of tissue, and where the fatigue is great and the food-supplies are small or coarse, irregular, and uncertain.

The late Mr. SKEY long ago pointed out the beneficial effect that followed the use of opium in indolent ulcerations affecting aged and enfeebled folk; and Mr. GEORGE POLLOCK has called attention to the remarkable benefit to be derived from the same drug in certain forms of sloughing and destructive disease of the mouth in children. There is evidently still much to be learned about the use of opium in its effect on the nervous system and the nutritive changes of tissue.

LADY PRIESTLEY'S article in the *Nineteenth Century* on "The Penalties of Ignorance" is worthy of perusal by every intelligent householder. It cannot, indeed, be said that the facts therein presented contain any novelty for the members of the medical profession, but they are marshalled with skill and effect, and their general dissemination would undoubtedly be most salutary. It is always depressing to reflect how far in matters connected with personal, domestic, and national hygiene and sanitation practice lags behind knowledge, and hence we should welcome every well-directed effort to bring to bear upon the public the latest results of science. Our profession cannot escape a considerable degree of responsibility in this matter. The press, popular lectures, and other agencies may do much to spread knowledge, but the family physician remains the usual court of appeal in matters that touch health at any point, and his deliverance is generally final. Hence, he must not disdain many

[1] THE LANCET, April 27th, page 1078.

things that may seem a little out of his province, such as the state of the drains, the cistern, the larder, the meat safe, and the like. Disease may lurk in each or all of these, and it would be entirely unworthy of scientific medicine to treat the results of domestic ignorance or carelessness without endeavouring to strike at their causes. As we were recently reminded by Professor ZIEMSSEN, medicine is now in the "etiological stage," and there never was a time when the public were quicker to recognise the importance of finding out and removing the sources of disease rather than attempting simply to palliate its effects. The ideas that are now spreading widely among the public are sound and valuable so far as they go—such, for example, as the importance of cleanliness, fresh air, pure water, pure milk, and unadulterated and wholesome food—but they are somewhat vague, and well-meaning but not fully instructed persons much need to be taught how the commonplaces and truisms of hygiene can be transformed into sound and salutary practice. To this end articles like those of Lady PRIESTLEY are valuable contributions. The writer begins by recalling the horrors of hospital practice when asepsis was unknown and unpractised, and, describing an old and insanitary hospital used at the time of the Franco-Prussian war, says with grim truth that "the wounded were carried in hundreds from the comparative safety of the battlefield to this sanctuary of death." Visiting the same hospital after the lapse of some years, the writer found that "the epoch had made its mark. ..... Throughout the corridors a whirlwind of air swept day and night, bath-rooms were established, the wards were untainted; silence, order, and cleanliness—scientific cleanliness—prevailed." Lady PRIESTLEY continues: "Since PASTEUR in the course of his chemical researches dragged the long-hidden cause of disease into light, and opened our eyes to a hitherto unsuspected law of nature, we can no more get rid of the newly revealed facts than we can stop the rotation of the earth. And yet this knowledge, so important in housekeeping, so useful to those who are responsible for the health of others, and which so closely concerns us all, forms no part in the general education of the people. The precious key has been given to us, but so far as domestic life is concerned the gates of knowledge remain closed." The writer's aim is to impress upon every woman who has charge of a household that PASTEUR'S discoveries concern her vitally; that the causes which produce disease and those which impair the wholesomeness of food are analogous; that in both cases the cause is frequently a bacterium which requires warmth and moisture for its growth; and that cold, fresh air, ventilation, and the avoidance of damp rob many, perhaps most, of these germs of their capacity for mischief. Visiting a larder in a fine old English mansion where recent scientific teaching had not penetrated she "was deeply interested to find herself in the midst of surroundings which had become more or less familiar to her in visiting various bacteriological laboratories in different parts of the world. ..... It was certainly most fascinating to discover Dame Nature at her work, fulfilling her *rôle* undisturbed in this most disapproved fashion. Here in the homely larder Nature was having her way unhindered by the scientific mind which in the laboratory keeps all things under control."

Other dangers of a like nature are passed in review by the writer. Milkshops in close conjunction with filthy mews, poulterers' shops with live rabbits fouling the atmosphere, meat exposed to all the exhalations from public thoroughfares—such are some of the commonest errors, but there are many others of a like nature. No country excels Great Britain in the fine quality of the meat offered for sale, but we are still far from fully realising the necessary conditions for preserving this meat in a perfectly sound and wholesome condition. The results are much waste of good food and much preventable disease. Cold storage is justly commended as one of the best means of averting all this waste and danger to health, and it is satisfactory to know that, long established as an ordinary practice in America, it is becoming acclimatised amongst ourselves. "Cold," as Lady PRIESTLEY says, "is one of the simplest and least objectionable antiseptics that can be used in the case of food, and must not be confused with freezing, which interferes more or less with the flavours of meat and game. In applying cold it is sufficient to preserve exactly the amount of chill that will suspend the vitality of the putrefactive organisms. Meat that is brought from New Zealand and Australia is frozen owing to the distance it has to come, but meat brought from America is simply chilled." The writer laments that the English law is so lax regarding the destruction of presumably diseased meat. The meat inspector is obliged to take each case before a magistrate and is liable to an action for damages if the magistrate takes a different view from his regarding the soundness of the meat. This is a very difficult question, and we are by no means clear that the law on this subject is to be condemned. It is unlikely that any intelligent magistrate will set aside the evidence of an expert, unless for very strong reasons. We should, however, entirely approve of means being taken to safeguard meat inspectors from frivolous actions for damages. The state of farms and farm buildings is passed in review by the writer, and the general neglect of cleanliness and ventilation animadverted upon. We are glad to think that much progress is at present going on amongst us with regard to these matters. Clean and well-ventilated farm buildings mean healthy cattle, healthy cattle mean pure milk, and pure milk means healthy children. Lady PRIESTLEY appositely quotes a remark from one of Sir WILLIAM JENNER'S essays, and with this quotation we conclude our notice of a very interesting, valuable, and timely article. "Can we wonder," says Sir WILLIAM JENNER, "that rickets is prevalent among the poor of London? Can we fail to wonder that geography, history, and crotchet work form such large items in the instruction imparted at our national schools and the doctrines of life so small an item? Let the girls there educated be taught that Constantinople is the capital of Turkey if it is of any advantage for them to know it, but let them also learn how to dress, feed, nurse, and lodge an infant so that it may run a fair chance of not swelling the amount of that truly awful column in the Registrar-General's return—'Deaths under one year.'"

THE recent disclosures of the horrible treatment of a woman in Ireland for the purpose of expelling a witch who was supposed to be the temporary tenant of her body are

so repulsive and revolting to educated people of the present day that it is difficult to realise that a belief in the relation of witchcraft to disease was quite general in this country up to a century or two ago. Not only by the unlettered but by the highest intellects in the land witchcraft was regarded as so well established as to be unquestionable. Sir MATTHEW HALE, Sir THOMAS BROWNE, and, if we mistake not, Lord BACON, all gave most positive utterances on the subject. In the middle of last century a captain of the City Guard was burnt in the Grassmarket in Edinburgh on the charge of being a "warlock" or wizard, and the frequency of executions in other countries in the Middle Ages may be imagined from the estimate (no doubt exaggerated) which SPRENGER gives of seven millions, as the number of those executed by judicial process in consequence of the Bull of INNOCENT VIII. making witchcraft a capital offence. The ways in which wizards or witches were supposed to interfere with the well-being of other people were many. They were supposed to prevent speculations becoming remunerative, to interrupt the course of true love, or to impoverish a man by sending a blight on his crops or a murrain among his cattle; and, further, they had the power, it was believed, of inducing disease and causing death in any individual whom they might select for their malevolent purpose. The diseases which seem especially to have been considered as due to such influences were convulsive nervous diseases, wasting diseases, and mental defect or paralysis in children. The revenue of a witch was largely made up by presents from parents to gain the goodwill of this powerful and dreaded person and so avert ill from them and theirs. In other cases they were paid to bring evil upon the donor's enemies, and it is to be feared that in these cases poison was not infrequently employed.

But, returning to more strictly medical cases, we can see a good deal of ground for the popular belief in the presence of unseen agencies. Taking convulsive affections, such as hysteroid or epileptic fits, who that has watched them and seen a frail girl thrown into strange contortions, struggling with sufficient force to tax the strength of several men, can fail to understand the almost universal idea that the bodies of such patients were "possessed" by some powerful mysterious spirit? So again when a girl, who previously was dull and stupid, in a hysterical fit recites with appropriate gesture and strikes difficult emotional attitudes with marvellous accuracy, feats which she cannot accomplish in her ordinary condition, what wonder that bystanders imagine that it is not the patient who is reciting, singing, and acting, but some clever spirit who has taken possession of her?

In various wasting diseases, such as diabetes, cancer, and tuberculosis, in spite of the patient eating freely, if not ravenously, the food does no good, and the patient gets rapidly thinner. The explanation by spirit possession must seem to primitive minds an obvious one, the spirit stealing the food which the patient swallows for his own nourishment. Such ideas of possession are to be found among all the lower and uneducated races, and no doubt were entertained by our ancestors and have been handed down by word of mouth to many of their descendants to-day. But in not very distant times this idea of possession underwent a further development. Not only was a strange spirit introduced into the body, but the real occupant of the body was carried away and kept prisoner by the fairies, who were under the power of the witches. Later, the body as well as the spirit was supposed to be substituted, and what is called "a changeling" left in its place. Usually this change took place in the cradle, but occasionally, as in the recent case of BRIDGET CLEARY, an adult was supposed to be similarly changed. This belief in changelings can be traced in many old Celtic legends, particularly Irish ones,[1] and is found also in SHAKESPEARE. HENRY IV. is lamenting over the follies of his son and contrasting him unfavourably with HOTSPUR, the Duke of NORTHUMBERLAND'S son, and says:

> "O, that it could be proved
> That some night-tripping fairy had exchanged
> In cradle clothes our children as they lay."[2]

It is easy in this case also to find some reasonable explanation for the popular belief. Those who see many cases of obviously congenital mental defect in children know how reluctant even educated parents are to admit the possibility of the child having been born otherwise than healthy. A mother will hardly admit, even to herself, the slightest defect in her child's intellect for many months, and even then she believes that it has only just appeared and will assure the physician that it was "a beautiful baby born," but that "since it was vaccinated," had a fall, a fright, or what not, "it has not seemed the same child." In a country where belief in witches and changelings is firmly established, what is more natural than for the mother to snatch at the belief that some trick has been played by the fairies, and that her healthy child has been carried off and an idiotic substitute left? Were this all, no one would care to disturb so comforting a delusion, but, unfortunately, the result of these beliefs in "possession" and "changelings" has been to introduce most barbarous methods of treatment intended to make the quarters the spirit has taken up too hot to hold him. Among the Soudanese at the present day may often be seen most fearful scars—the result of treatment for the expulsion of spirits. If a man has pain in a limb, parallel cuts or chops are made in his arm to allow of the exit of the spirit. If the spirit is located in the trunk—causing colic, for instance—the actual cautery is very freely applied to the abdominal wall to drive the evil spirit out per rectum; and so on. In this country scourgings were frequently performed with the same object, but fire, partly from its theological associations, seems to have been the agent most relied on to expel evil spirits. With reputed "changelings," too, the ordeal by fire seems to have been often resorted to under the idea that if the spirit could be driven away a resubstitution of a healthy body would occur, either at once or after the performance of further incantations or exorcisms. This would appear to have been the belief actuating the Irishman now awaiting trial for causing the death of his wife by roasting her at the fire.

A little more than ten years ago a similar case occurred, also in Ireland, and was reported in the daily press. A woman had a child, apparently paralysed in some way, and the neighbours asserted him to be a changeling and desired

[1] See Kennedy, Legendary Fiction of Irish Celts. Macmillan and Co.
[2] Henry IV., Part I., act 1, scene 1.

to treat the child accordingly. The mother refused, so the neighbours watched their opportunity, entered the house when the mother was away, and roasted the child on a shovel with the usual incantations, causing injuries so severe that they were arrested and put on their trial. With the progress of education all these ideas as to the causation and treatment of disease—plausible and poetical as some of them may be—must die out; and the humaner methods of treatment, founded on scientific observation and experience, will become general, to the great benefit of suffering humanity.

THERE are few annual reports of more interest to the public and the profession than that of the Metropolitan Asylums Board. The Board is not in trouble, like other hospital boards, with the eternal difficulty of making both ends meet. It has had given to it by Parliament the work of supplying hospital accommodation gratuitously to all persons and classes affected with certain infectious diseases, and whenever it thinks that a new hospital is needed, or any new apparatus or laboratory or machinery is required, it has but to dip its hands into the deep pocket of the public and the thing is done. There is no Parliamentary discussion of its budget. All that Parliament has done is to remove the restriction originally attaching to these hospitals as places for paupers and to open them to all comers. The Board seems to appreciate the *carte blanche*. The consequence is that the expenditure in connexion with the hospitals has gone up from £350,000 in 1889 to nearly £600,000 in each of the last two years. There is, of course, much to show for such a huge expenditure. There are nine large fever hospitals, two small-pox establishments, four ambulance stations, three wharves, four ambulance steamers, four imbecile asylums, and a training ship for 600 boys. During the past year the actual work of the hospitals has been less than in the previous busy years. Scarlet fever has fallen almost to a minimum, though it shows, we believe, signs of the normal seasonal rise at the present time. The diphtheritic cases are subject to much less variation. The whole number of cases in 1894 was 34,203, as against 57,093—a difference of 12,890.

What is very striking in the report of the Board, and of much significance to the medical profession, is the growing proportion of admissions to notifications. All the notifications of disease are now passed on to the Metropolitan Asylums Board, and so it is enabled to compare the number of cases notified with the number received into hospital. In 1890 the admissions of scarlet fever cases were 42 per cent. of the notifications; in 1892 they had grown to 48 per cent.; and in 1894 no less than 63 per cent. of all the notified cases of this disease were sent into hospital, leaving only 37 per cent. to be treated at home. We shall not be far wrong in estimating that nearly half of all the serious notifiable diseases are now treated gratuitously in the hospitals of the Board. Well may the expenditure of the hospitals advance by leaps and bounds when so large a proportion of the public consents to accept gratuitous medical service and accommodation, apparently with the entire indifference of Parliament. The excuse for such a huge extension of the system of gratuitous hospital and medical service is what is called the protection of the metropolis from infectious disease, on which the Board congratulates itself. This may be so. We are in no position as yet to compare the amount of infectious disease in the metropolis as a whole under the system of the Metropolitan Asylums Board with what it was before, for the system of notification has only lately been introduced. But certainly we have still much need of protection. There were in 1894 40,925 notifications of disease under the Act of 1889, as against 67,485 in the previous year, 45,892 in 1892, 26,522 in 1891, and 29,795 in 1890. The allusion of Sir EDWIN GALSWORTHY to the question of antitoxin is in good taste and judgment. He treats the efficacy of the remedy as a point still *sub judice*. He mentions that in November the Board accepted the offer of the Royal Colleges of Physicians and Surgeons to supply it with antitoxin. This supply is one on which they can entirely rely, both as to quality and quantity. It is with such antitoxin that cases are now being treated, at the discretion, of course, of the medical officers, and in spite of the absurd protest of the faddists, who would deny to the dying children of these institutions the benefit of such treatment. In a few months we shall have materials for valuable conclusions on the subject. Meantime, though we have little reason to think that the hopes raised by this method will be disappointed, the dignified attitude for all concerned is one of careful observation and reserve. The Board is also indebted to the two Colleges for the bacteriological examination of the exudations in diphtheritic cases. It had come to recognise the need for such examination by the large number of cases certified and sent as diphtheria which turned out not to be so. This difficulty of diagnosis is mainly to be met by bacteriological examination, for many cases without the specific bacillus have all the apparent characters of diphtheria, and *vice versâ*. So urgent is this necessity that the Board contemplates the establishment of a bacteriological establishment of its own at an early date. In connexion with this matter, however, we may direct the attention of our readers to a letter which we publish this week from Dr. THURSFIELD, county health officer of Shropshire, in which he expresses a word of warning "as to the risk of accepting the absence of specific bacilli (even after expert bacteriological examination) as conclusive evidence that a suspicious case of throat affection is not diphtheria."

The comparative leisure of the Board during the last twelvemonth as compared with the previous year has been spent in anticipating other times of strain and pressure. Th managers have in contemplation the erection of two more fever hospitals, three additional ambulance stations, and an infirmary for imbeciles. Such provisions, even at the public expense, we need not say, imply a great amount of anxious and important work, which in the year involved no less than 526 meetings of the Standing Committees of the Board. We must defer any criticism of the medical work and aspects of these hospitals till we have before us the reports of the respective medical officers, which are always full of valuable material carefully and candidly supplied.

Annotations.

"Ne quid nimis."

THE CHITRAL EXPEDITION.

THE Government of India is certainly to be congratulated on its military servants and on the quality of the services they have rendered, as well as upon the successful issue of an expedition which has been followed from start to finish with keen interest in this country and India. And it was only natural that this should be so, for the incidents have succeeded one another with dramatic force and were well calculated to rouse our admiration and enthusiasm. The little band starting from Gilgit on the first note of danger to the relief of Chitral, under the leadership of Kelly and Borrodaile, made such a brilliant display of pluck and endurance that it riveted attention and tended for the time to dwarf the importance of the achievements that were elsewhere being accomplished. Turn which way we may, there have been exhibitions of intrepidity and fortitude in connexion with this expedition of which the nation may well feel proud. Battye, in command of his regiment of Guides, was, when he met his death, conducting their retreat before overwhelming numbers with a skill and coolness that excited the interest and admiration of all. As regards the beleaguered garrison of Chitral, so long cut off from all communication with the outer world, their situation was desperate and their defence heroic. The siege lasted forty-five days, the besieged lost more than a third of their strength in killed and wounded, and were subjected to repeated and energetic attacks from the enemy, besides undergoing the hardships incidental to such a position from insufficient and bad food and failure of supplies. Surgeon-Major Robertson, who was the Political Agent and Governor of Chitral at the time, reported that "the discipline, devotion, and fortitude displayed under circumstances which required all those qualities are beyond all praise." Where all behaved so well it is extremely gratifying to be able to give a very prominent place to the gallantry and devotion of members of the medical service. Surgeon-Major Robertson, who was himself badly wounded during the siege, showed throughout it that he was worthy of the occasion by his sustained courage, ability, coolness, and judgment; and with regard to another medical officer, Surgeon-Captain Whitchurch, the special correspondent of the *Times*, telegraphing from the camp, Dir, says that in the reconnaissance from Chitral Fort on March 3rd, when Captain Baird was mortally wounded, Surgeon-Captain Whitchurch showed conspicuous gallantry in carrying Captain Baird in on his back. Captain Baird (says the correspondent) was severely wounded, and was momentarily lost sight of, but Surgeon-Captain Whitchurch appeared carrying him. He was not, however, able to do this without interruption, but had to leave him every few minutes to go off and rush a wall at the point of the bayonet so as to make the way home. In this manner Captain Baird was conveyed to the fort, where he expired next morning, after strongly urging Surgeon-Major Robertson to bring Surgeon-Captain Whitchurch's bravery to the notice of the authorities. It is a matter of pride and satisfaction to us as medical journalists to have so often to record the gallantry and devotion of members of the medical services, and we have no doubt that on this memorable occasion such conspicuously brave and devoted services will receive the recognition they indubitably merit.

STREET NOISES.

THE essence of good government has been defined as "the greatest happiness for the greatest number," and it is surely time to reiterate the question whether something cannot be done to make life less unendurable for those who work with their heads and are compelled to live in great cities. We believe we are correct in saying that in no foreign town and in few other British towns is such licence given to anyone to earn a living by annoying his fellow creatures as in London. From an early hour in the morning the air is thick with the raucous yells of men and boys selling race-cards and halfpenny news-sheets. Later in the day the torment is aggravated by piano organs, so-called bands and street singers, while at a late hour of the night it is quite common to be disturbed by hordes of ruffians with voices like foghorns roaring out imaginary and highly spiced details of a murder which has never happened or some even more unsavoury subject. The police, it appears, are powerless. News-vendors cannot be interfered with if they move on, and they do move on—in a circle. Organs, we fancy, can only be moved from in front of the complainant's door, and as a piano organ is perfectly audible 200 yards away this remedy is useless. There is only one remedy, and that is to compel anyone who wishes to make a noise in the street for the purpose of getting money to pay a heavy licence for the privilege of so doing. No one would object to the sale of papers if it were not accompanied by howls worthy of an eighteenth century madhouse. Rates and taxes rise with the utmost regularity every year, and it is not too much to ask that something should be done to obviate a nuisance which gets yearly worse and worse. The ringing of church bells, which, except those of St. Paul's, are always out of tune, should on no account be allowed in London except for five minutes or so before service. Everyone who goes to church knows perfectly well at what time to go, and those who do not go probably do not want to know. In the ages of faith the ringing of bells drove away devils, but the latter-day fiend who yells "Paiper" and grinds organs is proof against their power, and to ring bells is but to add one more unnecessary noise to the large number of necessary ones which already exist. We have pointed out on several occasions that there is no legal right to ring or toll a bell except before morning and evening prayer or on the occasion of a funeral, and that the ringing of a bell previously to the celebration of the Holy Communion, which often now occurs in the early hours of the morning, is wholly illegal and unwarrantable. It is a great torture to many sick and weakly people.

THE WORK OF THE KENSINGTON FEMALE SANITARY INSPECTORS.

THE services of the female sanitary inspector are not, up to the present time, so frequently requisitioned by sanitary authorities that any apology is needed for briefly drawing attention to the work done by the inspectors belonging to the parish of Kensington, more especially as Dr. Dudfield's last monthly report contains an excellent joint account, by Miss R. Squire and Miss A. Duncan, of the work done by them during the year ending March 30th, 1895. The inspectors report that the registered workshops in the parish of Kensington amount now to 567, as against 448 last year, and all these numerous establishments have, they tell us, been systematically visited. In regard to the warming of the workshops, the inspectors report that during the late prolonged frost, when the mean temperature of the air was for some weeks about 28° F., many of the workshops were found to be without proper means of warming. It appears that efforts were made in many instances to obtain a comfortable degree of warmth by lighting the gas-burners at an early hour in the morning and allowing them to burn until work ceased at night. It is pointed out that this improper use of the lighting provision was accompanied by a closing of all means of ventilation, and that thus "the products of respiration added to those of combustion mingled in the stagnant air for a considerable

number of hours." It is to be regretted, the inspectors observe, that although ventilating gas-burners are in the market they do not find a place in the workshops. Attention has also been paid to the subject of gas iron-heaters, and in many instances the inspectors have been able to get these heaters placed in more desirable situations, and even in some cases removed from the workrooms altogether; and they note with pleasure that in Section 19 of the Factory and Workshops Bill, recently introduced by the Home Secretary, "gas-irons emitting any noxious fumes shall not be used." At the same time they express their regret that the clause has been restricted to steam laundries. In the matter of ventilation they do not write encouragingly, the enforcement of proper ventilation meeting, we are told, with the greatest opposition. As they aptly put it, "provision for maintaining the purity of the air of the room unhappily conflicts with the prejudices of the class whose benefit is chiefly sought thereby." The difficulties are, the inspectors observe, enhanced by the fact that the Public Health (London) Act, 1891, confers no adequate powers for dealing with the subject, and they suggest the insertion in the Factory and Workshops Bill already referred to of a clause requiring workrooms to be at all times effic'ently ventilated, with special provision for ventilation during meal-times. Ventilation, the report states, is especially unsatisfactory where the rooms are lighted by skylights, in which the openings, often too small, tend to cause a draught of fresh cold air upon the heads of the occupants. Overcrowding seems to have been to some extent successfully dealt with by the service of "recurring" notices, but the inspectors hail with pleasure the fact that the Factory and Workshops Bill proposes to give a legal definition of "overcrowding." Separate sanitary conveniences for the two sexes have in numerous instances not been found by the inspectors, but the action taken has in all cases resulted in the necessary provisions. In dealing with the improvements effected in the laundries of North Kensington they remark: "Many expressions of appreciation have been received from the women themselves, and it is beyond question that the liability at any time to a 'surprise visit' from the inspector, usually spoken of as the 'sanitary lady,' has produced a good effect." We can well believe this, and we congratulate the "sanitary ladies" on their year's work. A perusal of their report side by side with the Factory and Workshops Bill cannot fail to be both interesting and instructive.

THE SUBSTITUTION OF POTATO OR BEET-ROOT SPIRIT FOR GENUINE BRANDY.

THE British Consul at La Rochelle, Mr. Warburton, in his reports from time to time to the Foreign Secretary has frequently drawn attention to the fact of the falsification of brandy in his district, and his recent remarks upon the practices of English dealers, which to some extent exonerate the French merchants from blame, we regard as serious and important enough to call for some authoritative action. Our point of view is solely, of course, the medical one. Brandy is extensively used in medical practice, in which, as every practitioner knows, it is a powerful agent for good; indeed, its timely administration has without doubt again and again been the means of saving life. It is a consideration of these facts which leads us to appeal to the trade, or the authorities who have some sway over the trade, to redeem French "brandy" from the grave charges made concerning its manufacture. Thus, it is stated on the authority of the British Consul that English dealers request French merchants to sell them an article under the name of cognac at a price so low that it is utterly impossible to supply them with anything but potato or beet-root spirit for the money. It takes eight gallons of wine to make one of brandy, and the first cost of this gallon is about 8*s*. It is not fit to use until it has been kept for some years, so that there is the expense of storing, loss, &c. to be borne, with the result that a gallon of pure brandy old enough to drink cannot be purchased for less than 12*s*. In spite of this the British merchants ask the French merchants to supply "cognac" at from 2*s*. 6*d*. to 4*s*, and the offer of such a price amounts to giving the latter their choice between making up this liquor or losing their custom, and many respectable French merchants are obliged to do so. They argue, justly enough, that there is no deception on their part, as the buyer knows that what they give him at this price is not cognac, and if he sells it in England as such they are not responsible. There is plenty of cognac, further writes Mr. Warburton, to be got in this district old enough for consumption at from 15*s*. per gallon upwards, according to age and quality, by applying to respectable French merchants, and they are only too glad to supply it, as they deplore the injury done to the reputation of the old brandies of this district by the sale of the unwholesome mixtures which have replaced them of late years. It seems to us that this policy on the part of English merchants is simply suicidal, since a knowledge of these facts is surely calculated to lead consumers and the medical profession to obtain their brandy from a source where a guarantee is furnished that it is made from nothing but wine or fermented grapes. Some of our own colonies, for instance, are turning their attention to brandy-growing, and in view of the above statement they deserve every encouragement on this as well as other grounds.

PULMONARY ANTHRACOSIS.

IN a communication to the International Medical Congress at Rome Dr. Tripier of Lyons combated the idea that anthracosis of the lung is in any sense a specific disease peculiar to miners, and advances arguments to prove that this condition is simply pulmonary tuberculosis modified by the special circumstances of the case. His view is as follows: "The phthisis of miners is simply of a tuberculous nature, but predominantly fibrous, in which the carbonaceous infiltration of the pulmonary tissue, especially as regards pathological products, may be so abundant as to cause the lungs to assume such a peculiar aspect as sometimes to render difficult of recognition the tuberculous lesions thus more or less concealed by the accumulation of the carbon." He believes that when animals are made experimentally to breathe air full of particles of carbon the lungs are simply found surcharged with these particles, but without the inflammatory lesions and scleroses characteristic of pulmonary anthracosis, and that when miners succumb to accidents their lungs are found in a similar state, but without evidence of tubercle. In spite of these facts which Dr. Tripier regards as well known, he states that there is a tendency to describe pneumokoniosis (pulmonary anthracosis) as an independent malady produced by the inhalation of particles of coal, silica, or oxide of iron. The object of his communication was to bring forward some pathological evidence in support of his own view. In one of his cases the patient had succumbed to "la phthisie charbonneuse," and on post-mortem examination the lungs were found to be full of particles of carbon, and much sclerosed, but further examination demonstrated the existence of a cavity at one apex and the presence of caseated tubercle. It is possible, of course, to argue that the tubercle was a secondary result of the infiltration of the lungs with particles of carbon. Dr. Tripier combats this view. In the case in point the patient had worked for fifteen years in mines without developing any pulmonary lesion, and had ceased from this occupation for six years before showing signs of commencing disease of the lungs. In a second case brought

forward by Dr. Tripier the patient had breathed a carbonaceous atmosphere for thirty-one years without any pulmonary trouble, and finally succumbed to cancer of the stomach. On post-mortem examination the lungs were found to contain particles of carbon widely disseminated, and specially numerous in the lymphatics, but without any sign of tubercle. The writer further argued that the amount of carbonaceous infiltration of the lungs bears no relation to the probability of finding tubercle. The latter may be found in miners with little or much carbon in their lungs, and in those who have spent few or many years in occupations involving the constant respiration of carbonaceous particles. Cases such as those brought forward by Dr. Tripier are, of course, inconclusive, but they must be allowed reasonable weight. They certainly tend to corroborate the view that pneumokoniosis or pulmonary anthracosis is not an independent affection with a definite cause and definite natural history, but simply one of the many varieties of pulmonary phthisis.

"INQUEST AT STAPLETON: A QUESTION FOR THE MEDICAL COUNCIL."

SUCH is the heading of a report in the *Bristol Mercury* of an inquest at Stapleton held by Mr. E. M. Grace concerning the death of Walter John Edward Hinton, aged thirty, a coachsmith. The evidence went to show that the deceased had no local medical attendant, but was taking a certain balsam for which the ordinary charge was 22*s.* and 11*s.* 6*d.* per bottle. Dr. J. Ambrose said he had made a necropsy and found death to have been caused by syncope, though deceased was suffering from advanced phthisis. Life might have been prolonged had he had medical attendance weeks ago, but there was no chance of saving it in the advanced state of lung disease. A letter was read from "Dr. Congreve" of Coombe Lodge, Peckham, London, S.E., to a relative of the deceased, commending the balsam and prescribing for diarrhœa, though suggesting his continuing under the care of a local medical man, observing that the balsam would not interfere with the medicine the local practitioner might order. The coroner intimated that it was his duty and intention to send the letter to the General Medical Council.

DISEASED MEAT AT BLACKPOOL.

A GOOD illustration was afforded recently at Blackpool of the enormous difficulties which may be experienced in bringing a prosecution for the exposure of diseased meat to a successful issue in a court of law. In the case in question a butcher was charged by the Blackpool sanitary authority under Sections 116 and 117 of the Public Health Act (1875) with having exposed for sale certain meat alleged to have been unfit for human consumption. The inspector of nuisances—an officer of fourteen years' experience—seized seventeen pieces of meat exposed for sale in the defendant's shop, and after ample opportunity had been afforded to, and taken advantage of by, the defendant's witnesses to inspect the meat seized it was seen by a magistrate and condemned. The inspector gave evidence as to the condition of the meat, and Dr. Jasper Anderson, the medical officer of health, stated that the changes in the state of the meat were such that it would be dangerous for human consumption. Dr. Anderson was of opinion that the beast from which the meat was taken had been suffering from a chronic wasting disease, but on account of the viscera being absent he was unable to state to what this condition was due. This witness's evidence was practically corroborated by Dr. Leonard Molloy and several other witnesses, among whom were veterinary surgeons and butchers. For the defence a large amount of evidence was brought forward, the witnesses also including medical men, veterinary surgeons, and butchers. As rebutting evidence the prosecution called the county medical officer of health and Professor Delépine, Professor of Pathology at Owens College, Manchester, both of whom declared that the meat as described by the prosecutor's witnesses would be quite unfit for human consumption. Considerable stress was laid by the defence upon the fact that the viscera of the beast from which the meat was taken had not been examined; but it would surely be unreasonable to make the condemnation of diseased meat exposed for sale in a butcher's shop dependent upon the examination of the viscera. The bench fined the defendant £5 and costs, or two months' imprisonment; but probably, in spite of this, the prosecution must have been a somewhat heavy expense to the Blackpool sanitary authority, as the costs awarded by the bench only amounted to £13 15*s.* 6*d.* It is, however, only fair to state that in answer to the defendant's solicitor the bench stated that there was no evidence that the butcher was aware of the meat being unsound. Dr. Anderson is certainly to be congratulated on having been successful in what was obviously a very difficult case, and the evidence shows what very costly proceedings prosecutions of this kind may sometimes become.

A MEDICAL PALÆONTOLOGIST.

IN the Palæontographical Society's volume for 1894, which has just appeared, Dr. Wheelton Hind of Stoke-on-Trent contributes the commencement of a monograph on the Carbonicola, Anthracomya, and Naiadites of the Coal Measures. We congratulate Dr. Hind on the energy he has displayed in the production of this work, and we are proud to recognise that the scientific spirit of our profession is sometimes shown in the extension of knowledge not always directly related to medical subjects. The monograph has much valuable information in the introduction and in a chapter headed "Critical Bibliography." The rest of it is naturally almost entirely descriptive. It is accompanied (as are all the monographs published by the Palæontographical Society) by a series of very beautiful plates. A very large number of these drawings are from specimens in Dr. Hind's own collection. For the information of the reader unlearned in geology it may be stated that Carbonicola, with which this volume principally deals, is a genus of bivalve molluscs, probably of freshwater origin, and most closely allied to Unio and Anodon amongst living genera.

TRAUMATIC GLYCOSURIA.

"EVER since the time of Claude Bernard, who first experimentally demonstrated the existence of the so-called sugar centre in the floor of the fourth ventricle, head injuries have been recognised as playing a certain part in the etiology of some cases of diabetes." Such is the introduction to a paper by Dr. F. A. Higgins and Dr. J. B. Ogden in the *Boston Medical and Surgical Journal* of Feb. 28th. The paper is the result of observations made in 212 cases of head injuries. The writers remark that in addition to permanent glycosuria following traumatism of the head there is another form mentioned by some observers, and of which a number of cases have been reported. This last form is merely transitory, and comes on directly after the traumatism or in a few days. On the other hand, the permanent form of glycosuria occurs at a period of weeks or even months afterwards. After giving an account of the various classes of cases met with they summarise their conclusions as follows: 1. That, after injury, sugar may appear in the urine as early as six hours and disappear within twenty-four, the average time for its appearance, however, being from eight to twelve hours; and for the disappearance of the same from the fifth to the ninth day. 2. That a small proportion of the cases may exhibit a permanent glycosuria from the date of injury to the head. 3. That acetone and diacetic acid are rarely, if ever, found in such cases, excepting where the condition becomes a permanent

glycosuria, and even then probably only after a number of months or years. 4. That, of the twenty sugar cases recorded in the paper, eleven (55 per cent.) had received an injury to the right side of the head, five (25 per cent.) to the left side, three (15 per cent.) to the occiput, and two (10 per cent.) where there was no external evidences of violence. 5. That it is impossible in the present state of the knowledge of the pathology of diabetes and glycosuria to draw any inferences from the necropsies which have been obtained. They are, however, reported in full. 6. There is little to be said in regard to the mortality. Of the twenty cases eight died, six being the direct result of severe injuries, one from intercurrent disease, and one from the probable effects of alcoholism. In the 212 cases sixteen were fatal, 50 per cent. of these having glycosuria. Albumen, together with casts and abnormal blood, was found in every case containing sugar, probably secondary in most instances to the renal irritation produced by the sugar, even though it had been eliminated only a short time.

FEES FOR NOTIFICATION OF DISEASE.

AT the Keighley County Court held on April 24th his honour, Judge Gates, Q.C., said that after further consideration he was satisfied that he was right in deciding at the previous court against the plaintiff in an action brought by Mr. Beckett, L.R.C.P., of Cullingworth against the Bingley Outer District Council to recover a fee for the notification of a case of infectious disease which happened to have been previously notified by another medical man. Leave to appeal was refused. We have not the details of this case before us, but on the general question which is here involved we would recall attention to the letter of the Local Government Board to the Uppingham rural sanitary authority, which was published in our fourth article on Difficulties under the Infectious Disease (Notification) Act,[1] and in which that Board hold distinctly that where two practitioners are called in to visit one and the same patient, either at the same time or successively, "both are, in strict law, required to send certificates of notification, and these must be duly paid for by the sanitary authority." The Local Government Board are not in the habit of giving opinions of this sort except on skilled legal advice, and if the Keighley case referred to comes within the scope of the Board's letter it is one that ought not to be allowed to drop.

IRRIGATION AND CLIMATE.

MR. W. E. GARSTIN, head of the Public Works Department in Egypt, writes as follows in an appendix to Lord Cromer's annual report on that country:—"An unusually large area of land was planted with cotton in 1894. Unfortunately, the cotton worm during the summer and the cold and fogs during the autumn months caused between them such damage to the plants that the yield is estimated to be from 10 to 15 per cent. less than that of 1893." Referring to this statement, a correspondent, who lived for several years in Egypt, would be glad to know whether there is any truth in an assertion, which he has heard made by many people, natives as well as foreigners, that of recent years the climate of the Delta has become much damper than it used to be, and that augmented irrigation, including the holding up of water by *barrages*, is responsible for the change. As far as we are aware the only meteorological records in Egypt that extend back for a considerable number of years refer exclusively to Alexandria, where the climate is quite different from that prevailing inland. The note upon the Public Works Department in the appendix to Lord Cromer's report, referred to, also gives a good deal of information about irrigation, the *barrage*, drainage, reservoir projects, and crops. What seems to be much required at the present time in connexion with the public works in Egypt is a system of drainage and pumping. Irrigation without drainage gives rise to water-logging of the soil. Every drop of water turned on to the soil should be passed through it and carried away by an effective drainage system, with the exception of that necessarily evaporated by the sun's rays. It is, therefore, probable that there is some measure of truth in the belief that the atmospheric moisture and the prevalence of fogs have somewhat increased, but we are not aware that any changes in this respect have ever been scientifically observed and recorded. As far as we are competent to judge, we should say that the difference between modern and ancient methods of irrigation in Egypt could not produce any marked alteration of climate. The volume of water delivered by the Nile does not vary much from year to year, and the temporary detention of a small portion of it is all that can be laid to the charge of extra irrigation. But some of our readers may, perhaps, be able to supply information on the subject.

IMPORTED FROZEN MILK.

THE rapidly increasing importation of frozen milk from Holland, Sweden, and other places is a serious question, since so far as we can gather there is no guarantee of its being derived from an uncontaminated source. Our own centres of milk production are, of course, placed under strict sanitary regulations, so that as far as possible disease may not be disseminated by the means of so ready a carrier as milk has been proved to be. The efforts, therefore, of our sanitary authorities to prevent milk-borne diseases may, for aught we know, be seriously handicapped. We trust that the Government will make some inquiries into this important and, it may be, very serious matter. The position is absurd and is also alarming if it can be shown that while the strictest preventive measures are taken against the importation of diseased cattle no steps whatever are provided against the importation of milk the consumption of which may possibly be fraught with equally serious issues. The question, too, has an important bearing upon the subjects dealt with by the Royal Commission on Tuberculosis, whose report we considered last week.

CHLOROFORMISATION BY MINIMAL DOSES.

IT is a curious revelation of the uncertainty which exists in the minds of the profession with regard to chloroform that we find such conflicting plans suggested to ensure safety; on the one hand we are told it is almost impossible to kill, while on the other it is averred that to use chloroform at all is little short of committing manslaughter, while the surgeon who desires it is accused of "inciting to kill." Happily such fantastic extremes are seldom found in this country, but when we come to questions of how to give the anæsthetic views as diverse are found to obtain. Simpson's oft-repeated formula, "The chloroform vapour must always be exhibited as rapidly and in as full strength as possible," and Syme's even more trenchant rule, "Do not stint the quantity of chloroform," and the more recently expressed views of the Hyderabad Commission seek salvation in large doses freely given, while others tell us that the only safe way of using the drug is a guttatim method. Thus Mr. Martin Coates, writing in our columns in 1882,[1] stated that he employed chloroform in doses of a few minims at a time, using Snow's inhaler, and believed his results, twenty-four years of active surgical practice without a death, were due to his method. Since then many have adopted minimal doses of chloroform and have been immensely impressed by their success. Messrs.

[1] THE LANCET, Feb. 16th, 1895.

[1] THE LANCET, Dec. 23rd, 1882.

Krohne and Sesemann's apparatus, which we figured and described in our columns,[2] appears to offer the best method of obtaining a free dilution of chloroform vapour and of reducing to minima the actual quantities used. It would be obviously impossible for us to pronounce that the one safe road to chloroform anæsthesia is through the gate of minimal doses. The remarkable statistics of Simpson, of Syme, of Lister, and of Lawrie show what can be done with unmeasured, unstinted dosage, while Snow's, Clover's, and Junker's instruments show how much safety can be ensured by methods which definitely mix the narcotic with air and permit of the inhalation of a low percentage vapour.

KINGSCLERE DISTRICT COUNCIL AND MEDICAL REMUNERATION.

THE *Reading Mercury* of April 27th reports that at a meeting of the district council for Kingsclere "Dr. Maples was awarded £1 per annum for extra duties on account of the parish of Newtown having been transferred from Newbury Union." It would be curious to know what are the details of the extra duty that is to be so handsomely rewarded by the district council. We may anticipate a rush to Newtown as a parish so healthy as to need only so much attention from an officer of health as will be remunerated by less than sixpence a week.

PARALYSIS FOLLOWING NON-DIPHTHERITIC MEMBRANOUS CROUP.

REFERENCE to a case of this character, described in the *Archives de Médecine Expérimentale et d'Anatomie Pathologique* by Dr. Bourges, is made in a recent number of the *Neurologisches Centralblatt*. A boy aged seven developed, after an attack of pseudo-membranous sore-throat, paralytic symptoms affecting the palate, the ocular muscles, and the lower extremities. The mother of the child passed through a similar illness, but without the paralytic sequelæ. Bacteriological investigation of both cases failed to reveal the presence of Löffler's bacillus, but demonstrated the presence of other cocci and bacilli. But, as the writer in the *Centralblatt* points out, the case is a by no means conclusive one, for the membrane in the boy had been treated with a solution of corrosive sublimate on two occasions before the examination was made, and it is possible that this treatment may have been the means of getting rid of the bacilli.

CARDINAL VAUGHAN ON FREE RECREATION.

A PROPOSAL made by Cardinal Vaughan at the late meeting of the Sanitary Conference at Manchester (a report of which will be found in our Manchester correspondent's letter) is of interest as illustrating the progress amongst us of a benevolent socialism. The suggestion aims at the establishment of winter recreation halls in the poorest districts of large cities. In these halls musical and other entertainments will be given and suitable refreshments provided, the latter at cost price. The responsible promoters will be the civil authorities. The scheme thus briefly sketched is not without merit, either in its plan or its intention. There is a tendency in modern legislation, as Cardinal Vaughan observes, towards the recognition of health, comfort, and moral welfare as objects within the scope of its operation. The project above mentioned, moreover, is not in itself novel. It has already found a thousand means of expression in limited and local voluntary agencies, commonly more or less religious in character, but not necessarily so. Extended to the scale proposed by Cardinal Vaughan, however, it draws even more largely upon public charity, and it raises the question whether self-help or municipal assistance furnishes the best means of attaining the end in view. We believe that the former is still as a rule effectual for its purpose, and that it can be supplemented if required by voluntary aid, and if this be the case any large appropriation of public funds to purposes of recreation seems hardly to be called for. The effect of the civic recreation hall as a competitor with other like voluntary institutions, must also be reckoned with. It has been stated that the proposed scheme is calculated to foster domestic life by providing for the family a common focus of amusement. To a limited degree, no doubt, this is true. At the same time we must remember that order, thrift, industry, and all else that goes to constitute the backbone of family life come less by pleasure-seeking (especially out of doors) than by more deliberate processes of education.

[2] THE LANCET, Nov. 3rd, 1894.

THE PLAGUE AT MACAO.

IT seems that several deaths are alleged to have taken place at the Portuguese settlement of Macao from plague, and that the disease is stated to have been prevailing there for about a fortnight. Communication between Macao and Hongkong is quite unrestricted, and this has given rise to a good deal of anxiety at the latter place, where the people are desirous of having a rigid quarantine enforced against the infected settlement. His Excellency the Governor of Hongkong is opposed, however, to any action being taken in this direction, and this has led to the resignation of the unofficial members of the sanitary board. Without further particulars as to the exact nature and extent of the disease prevailing at Macao it is difficult to pronounce any definite opinion on the matter. If the disease be veritably and indeed plague it is indubitably contagious, and if any doubt exists as to the exact nature of the malady all persons coming from Macao should at least be medically inspected, and segregated if necessary. We strongly suspect that local insanitary conditions have a good deal to do with the existence of this and other diseases in China, and that in any case the removal of these should occupy the attention of the people at Hongkong. It can scarcely be, we think, that the Governor and official members of the sanitary board would incur the responsibility of opposing the wishes of the colony in regard to the establishment of quarantine unless they had some grounds for doing so of which we are ignorant at present.

THE STOMACH TEST IN MURDER TRIALS.

IN the *Boston Medical and Surgical Journal* of Feb. 28th Dr. Gustav Liebmann contributes a short paper on this subject. He states that the object of this test is to ascertain, by the presence or absence of solid contents or by the intermediary stages of liquefaction of food found in the stomach, how far the process of digestion has advanced, giving thus a clue as to the time at which the death of the victim has taken place, provided the time of the last meal be known. In order to arrive at an exact, or at least approximately exact, conclusion, the first and imperative condition would be a uniformly established schedule of time in which the different phases of digestion should be completed. If there be such a physiological law, from which there is practically no deviation, we should place full reliance upon the test; but if there be, in healthy people even, numerous exceptions or deviations the test must of necessity be open to errors. Dr. Liebmann considers that this latter proposition is the true one. The different variations in the duration of the digestive process depend upon the following conditions: 1. The length of time necessary for the transformation of solids into chyme in healthy individuals varies a great deal according to the digestibility of the different foods. 2. The length of time necessary to expel the ingesta from the stomach into the duodenum in the healthy individual varies according

to the quantities of food taken. Not only does it take a longer time for larger quantities to be impelled on, but the motor activity of the stomach walls is diminished by the greater distension produced by the larger amount of food present. Thus, pieces of meat are frequently found a day or longer after ingestion. 3. The shorter or longer stay of food depends on the amount of acidity, which varies in different stomachs even within the border lines of health. 4. Much variation even in health is caused by individuality, by presence or absence of pepsin, hydrochloric acid, psychical factors, and emotions (fright, fear, grief, or the opposite, as joy or exaltation). We see, therefore, that owing to the many physiological variations, which do not permit of any reliable deductions even in the healthy, the forensic value of this test must be considerably impaired.

DIRECT LARYNGOSCOPY.

Dr. KIRSTEIN of Professor Senator's policlinic in Berlin has devised[1] a new method of examining the larynx and trachea, in which the interior of these organs is seen directly and not by the intervention of a mirror or prism. He does not say, however, that his plan is applicable generally, but only that in "many persons" it can be carried out. The patient is placed on his back in the horizontal position with the head hanging down, and an œsophagoscope is introduced. A metal speculum in the form of a tube about ten inches in length can then be passed behind the epiglottis and illuminated by a "Caspar's electroscope" and through it the larynx viewed with the naked eye. It does not do for the observer to wear spectacles, as these rapidly become dimmed with moisture. The tube itself acts as a tongue depressor, being a lever whose fulcrum is the edge of the upper incisors. Dr. Kirstein does not, of course, suggest that this method should ordinarily be employed instead of the common method of laryngoscopy, but he thinks that in some cases it will be found capable of extending usefully our methods of laryngeal and tracheal examination, and he asserts that it is by no means so severe a procedure as may be imagined, and that, especially if cocaine is employed, it causes the patient no distress either at the time or subsequently.

THE AFTER-CARE ASSOCIATION.

THE annual report of the council of the After-care Association for Poor Persons discharged recovered from Asylums for the Insane has just been issued for the year 1894. Attention is drawn to the fact that this association is the only one in this country that offers the special help afforded by it to those poor people who are recovering from insanity. That such people are very often in great need of help when discharged from asylums is well known to medical men, especially those engaged in the treatment of insanity. The general public, though ready enough to think that people are often sent to asylums unnecessarily, is very unwilling to offer employment to those who have recovered from an attack of mental disorder; and the popular belief that a man or woman who has been ill thus may "break out at any moment" and is quite unfit to be trusted in any way is a strongly fixed one. Hence the special need of such an association, which is really entitled to all the help the benevolent can bestow upon it. The number of cases assisted in 1894 was 118, as compared with 81 in 1893, 100 being men and 18 women. Cases have been assisted by being placed in the association's convalescent home, by boarding them in country cottages, by grants of money or clothing, by finding them occupation, and in other ways. It is satisfactory to notice that the receipts from subscriptions and donations show a fairly large increase for the year. Local district secretaries have been appointed in many districts, and more lady guardians have become members of the society. Instances are given of cases helped during the year. The council invites the warm coöperation of the medical superintendents of the various asylums and guardians of the poor throughout the country. Since the issue of the report the association has, unfortunately, lost the services of its chairman, the late Dr. Hack Tuke, whose interest in this work was well known, and who was also one of its trustees. The secretary is Mr. H. Thornhill Roxby, Church House, Dean's-yard, S.W.

[1] See a preliminary communication in the Allgemeine Medicinische Central-Zeitung, April 24th, 1895.

SAMPLES FOR REFERENCE UNDER THE FOOD AND DRUGS ACT.

WE have frequently commented upon the loopholes of escape which the Food and Drugs Act affords to the seller when those entrusted with the administration of the Act fail to observe, it may be, some slight point when purchasing the sample. In a case reported last week, however, a positive blunder was committed, inasmuch as the bottle containing the sample reserved for analysis at Somerset House was only half full, the seal was not perfect, the cork had been pierced, and the sample measured only three ounces. An analysis by the referees was, of course, impossible, not only on account of the smallness of the sample, but also because the milk, having been exposed to access of air, had undergone certain changes which preclude a satisfactory analysis. As the magistrate (Mr. Bushby) remarked, this was a serious reflection upon the prosecution, as the sample in question had been retained in the custody of the sanitary inspector of the parish, and the case had broken down. The summons was dismissed. In regard to milk especially, or other perishable articles, it would be satisfactory if the Government could see their way to establishing a laboratory especially equipped for the immediate analysis of all duplicates taken under the requirements of the Act, whether their genuineness is suspected or not. This step, it seems to us, cannot be utterly impracticable, but of course it would involve a good deal more work than is done at Somerset House at present; milk, however, is one of the most important members of our food-supply, if indeed it is not the principal article about the quality and purity of which there should be no question.

THE HEALTH OF PROFESSOR HUXLEY.

WE are glad to be able to state authoritatively that the Right Hon. T. H. Huxley has lost no ground during the last few days. His temperature is only very slightly raised, and though he is still troubled by cough and expectoration, he is able to take a fair amount of liquid nourishment, and sleeps well. His general condition remains weak.

WE regret to announce the death of Professor Carl Ludwig, the eminent physiologist, which occurred in Leipzig on April 25th. A short account of his life and work from the pen of our Berlin correspondent will be found in another column. We hope to publish a full obituary notice next week.

A TELEGRAM from Buenos Ayres says that advices received there from Santos announce that yellow fever in its severest form has broken out at Santos, the daily mortality being six.

WE are asked to state that the Clinical Museum, Great Portland-street, is open every Tuesday at 2 P.M., and that there is a demonstration at 4 P.M.

THE subscription list to the Sir Andrew Clark Memorial Fund will shortly be closed.

REPORT OF THE COMMITTEE ON PRISONS.

I.

IN June last year the Home Secretary appointed a departmental committee under the chairmanship of Mr. Herbert Gladstone, M.P., to inquire into a variety of circumstances and considerations having relation to the administration of local and convict prisons and to the treatment of the prisoners confined therein. In their report the committee say that they "could not but be cognisant of the circumstances under which the inquiry was instituted. In magazines and in the newspapers a sweeping indictment had been laid against the whole of the prison administration. In brief, not only were the principles of prison treatment, as prescribed by the Prison Acts, criticised, but the prison authority itself and the constitution of that authority were held to be responsible for many grave evils which were alleged to exist." The committee, therefore, very properly applied themselves to the task not only of examining into present conditions of prison administration, but of endeavouring by inquiry to discover whether any and what better system and methods of treatment could be adopted.

The groundwork of the treatment of convicted prisoners in local prisons is laid down by the Act of 1865, and further provisions, including certain modifications, were introduced by the Act of 1877. Since 1865 the main principles of prison treatment have not been altered, except in detail, and in so far as they may have been affected by the radical change in the administration effected by the Act of 1877. Indeed, it may be said generally that neither those principles nor the administrative system laid down by the Acts of 1865 and 1877 had been brought into question until the present inquiry was instituted. Convict prisons—i.e., prisons for the detention of prisoners sentenced to penal servitude—have been dealt with separately by the Penal Servitude Acts, 1853, 1857, 1864, the Prevention of Crimes Act, 1871, and certain other subsidiary Acts. During the last forty years important alterations have been made in the treatment of prisoners, but continuity in the administration by the directors has been maintained throughout. With these preliminary statements and after acknowledging the great assistance that they have derived from previous inquiries, the committee pass on to a "general review" of the management of English and Welsh prisons, with regard to which they "consider that the long and able administration of Sir E Du Cane has achieved a large measure of success." At the outset the committee gave a return which shows that while the population has increased the number of convicts and local prisoners has decreased. The number of convicts has diminished from 10,139 in 1877-78 to 4383 in 1893-94; and the local prisoners—i.e., persons sentenced to shorter terms of imprisonment—have decreased in numbers from 20,833 to 13 850 during the same period. The committee say that "the decrease of the prison population cannot be taken as a correct indication of a corresponding decrease in crime." No; it is no more a correct indication of a corresponding decrease of crime than the filling of our churches on Sunday would be a correct indication of a corresponding increase of religion. Churches are built to attract, prisons to deter, and so far as churches and prisons respectively attract and deter, are filled and are not filled, so far may they be regarded as successful in attaining the object for which they were built. For it is obvious that if prisons were made attractive in any degree they would not be fulfilling their functions and their existence would become a stimulus to crime. We would prefer to express the position by stating that the decrease of a prison population cannot be taken as expressing the proportion of influence which the prison system has in bringing about the decrease. Some types of individuals are more impressed and influenced for good by prison life than others.

The general review is summed up in the following terms: "If the condition and treatment of prisoners at the present time are compared with what they were sixty, forty, or even twenty years ago, the responsible authorities can justly claim credit for great and progressive improvement. The bad prisons have disappeared. In the full consciousness of these improvements it was not unreasonable that there should have been a somewhat rigid adherence to the lines of the Prison Acts and great faith induced in the principles which they laid down. Moreover, the various inquiries which have taken place have all resulted in the general affirmation of the principles which were prescribed by the Acts. This was conspicuously so in the case of the lengthy inquiry into Irish prisons in 1885, when one of the chief efforts of the Commission appears to have been to raise the administration of the Irish prisons to the English level. We do not consider, therefore, that there is reason for general condemnation of a system which resulted originally from careful inquiry and much deliberation, and which was specially and successfully designed to put an end to many glaring and patent evils. Similarly, we do not consider that it is right to lay the burden of all the shortcomings of the prison system on the central prison authorities, who have carried into effect under successive Secretaries of State the Acts approved by Parliament, who have loyally and substantially carried out the various recommendations made from time to time by Commissions and committees, and who, as administrators, have achieved in point of organisation, discipline, order, and economy a striking administrative success. Nevertheless, we feel that the time has come when the main principles and methods adopted by the Prison Acts should be seriously tested by the light of acquired experience and recent scientific research."

The general effect of the passing of the Prison Act of 1877 is next dealt with. By that Act all local prisons were transferred from the local authorities in counties and boroughs to the Government and placed under the authority of a newly constituted Board of Commissioners acting subject to the authority of the Secretary of State. The intention of the Act was to produce an improved and uniform system through the strong and centralised administration of the Government, but at the same time to preserve local influences and the coöperation of the visiting justices by the institution of visiting committees to whom were assigned very extensive responsibilities and powers. In the opinion of the committee the intention of the Act in this respect for the most part has been a failure. The centralisation of authority, they say, has been a complete success in the direction of uniformity, discipline, and economy; but, on the other hand, it carried with it some inevitable disadvantages. "The great, and as we consider the proved danger of this highly centralised system has been and is that, while much attention has been given to organisation, finance, order, health of the prisoners, and prison statistics, the prisoners have been treated too much as a hopeless or worthless element of the community, and the moral as well as the legal responsibility of the prison authorities has been held to cease when they pass outside the prison gates. The satisfactory sanitary conditions, the unbroken orderliness of prison life, economy, and high organisation are held, and justly held, to prove good administration. But the number of recommittals has led us to think that there is ample cause for a searching inquiry into the main features of prison life. From the evidence submitted to us it appears that as a criminal passes into the habitual class, prison life, subject to the sentences now given, loses its terrors as familiarity with it increases." This last sentence is of the nature of a truism, and we can hardly picture in our minds the possibility of any other effect of familiarity with prison life. As regards what we may call the extra-mural requirements indicated by the committee, we would ask whether it has ever been held to be the duty of prison officials, except in so far as they are ordinary citizens, to follow up the discharged prisoner and see what he does or what becomes of him after he has become merged in the general community. The proper treatment of a prisoner is one thing, but the social supervision of an ex-prisoner from philanthropic motives is so voluntary in its character that it is well to detach it as far as possible from the atmosphere of officialism, which is so apt to place the individual in a compromised position, if not actually to damage his prospects. We honestly confess that we have no great faith in the reclamation of "old hands." And why the failure of their reclamation should be tacked on as in any sense due to the centralised system or referable to it we fail to see. The "moral condition" of a habitual criminal when he leaves prison or when he enters it is a veritable *ignis fatuus;* and there are few persons who would undertake to estimate it. Asking the question, Is recidivism increasing? the committee in a tentative way deal with this important subject, and in the end they say that it is difficult to avoid the belief that the proportion of reconvictions during the last twenty years has increased. But the reconvictions take place among the older hands, for it would appear that of every 100 who go to prison a first time seventy do not return, while of those convicted a fifth time as many

79 per cent. do return. This bears out the opinion expressed by the committee that so far as first offences are concerned the present prison treatment in convict and local prisons is amply sufficient for the purposes of deterrence. To our mind the non-return to prison of first offenders is the all-important factor for consideration, and we certainly agree with the committee when they urge that the most determined effort should be made to lay hold of incipient criminals and to prevent them by strong restraint and rational treatment from recruiting the habitual class. The committee point out that the head-springs of recidivism are doubtless in a large measure to be found in the social conditions of the general population. Lads grow up predisposed to crime and eventually fall into it. Mr. Davitt told the committee that he was speaking to an educated habitual criminal in Dartmoor and was pointing out how foolish it was, apart from the immorality of the thing, to risk getting seven years' penal servitude for stolen goods of the value of £10 or £20. The man replied, "Well, yes, that is all right coming from you, but put yourself in my position. I never knew my father or mother; my first recollection is being turned out of a workhouse. I fell among thieves. I got educated in crime. I learned to read and write in prison. Unlike you, I have had no moral training. Now I hold that man is naturally a thief. Take for instance a child in its mother's arms: anything that excites its fancy it wants to get, and if that natural feeling is not corrected by parental training and moral influence and education it gets stronger as the child grows older. Now I am such a product of your civilisation. You allowed me to grow up with these animal instincts uncorrected, and then you send me to prison when I exercise them."

The conclusion arrived at is that the habitual criminals can only be effectually put down in one way, and that is by cutting off the supply (during incipiency). The improvement of general social conditions is the work of the community. But the opinion that some of its worst and most dangerous products can be reclaimed by special and skilful prison treatment and that many of these would lead honest lives in different surroundings is emphatically maintained by many of the most capable and experienced witnesses.

THE SURGICAL CONGRESS IN BERLIN.

(FROM OUR BERLIN CORRESPONDENT.)

(*Continued from p. 1078.*)

SITTING ON APRIL 18TH.—(*Continued.*)

Congenital Dislocation of the Hip-joint.

PROFESSOR HOFFA (Würzburg) showed some cases of Congenital Dislocation of the Hip-joint which he had treated successfully by operation. He opened the joint after Langenbeck's method and formed an artificial acetabulum in which the head of the femur was inserted.—Professor Lorenz (Vienna) said that it is of great importance in this operation to save the muscles and tendons which are attached to the femur. He accordingly makes the incision in front, carefully avoiding the muscular insertions, and after the opening of the joint at this place an artificial acetabulum is formed and the head of the femur is brought into it by gradual traction.—Professor Mikulicz (Breslau) and Dr. Heusner (Barmen) recommended the treatment by orthopædic apparatus.

Operations on the Pancreas.

Professor Krönlein (Zürich) said that carcinoma of the pancreas was rare, only 6 per cent. of all carcinomata being found in this organ. Growths situated in the small end of the pancreas are the most favourable for operation. He reported a case of sarcoma where the isolation of the pancreas was very difficult and where ligature of the pancreatico-duodenal artery became necessary; gangrene of the colon resulted and caused the death of the patient on the seventh day.

SITTING ON APRIL 19TH.

Resection of the Gasserian Ganglion.

Professor Krause (Altona) has performed this operation several times for trigeminal neuralgia by a method which he has described at former meetings of this Congress. The effect was in all cases very satisfactory. By this operation it was proved that the trigeminal is the gustatory nerve for the apex and the sides of the tongue.—Professor König (Göttingen) said that he had seen severe hæmorrhage from the middle meningeal artery in the course of the operation.

The Etiology and Histogenesis of Carcinoma.

Professor Tillmanno (Leipzig) accepted the theory of Waldeyer and Ribbertz that carcinoma arises from any sub-epithelial proliferation by which the epithelial cells are isolated and made to grow abnormally. Experiments in support of the alleged zymotic origin of cancers have hitherto been without success, the bacilli found in the growth not being capable of producing real carcinoma in other persons. In patients suffering from carcinoma the growth could sometimes be transferred from one organ to another, but a transfer from one person to another has not yet been proved. Carcinoma often arises from prolonged chemical or mechanical irritation; in particular, the use of tobacco is very dangerous as regards the tongue and lips. Hereditary predisposition is unquestionable. Females and negroes are especially liable to it. Cases of carcinoma are rapidly on the increase, their number being at present four times greater than it was forty years ago.—Dr. Geissler (Berlin) showed a dog to which he had communicated carcinoma by inoculating pieces of a cancer taken from a woman.—Dr. Haussmann (Berlin) believed that the new growth was not carcinoma.—Dr. Friedrich (Leipzig) said that he had made experiments in reference to the therapeutic action of bacteria toxines on malignant growths. In carcinoma no effect at all could be discovered, but he had reason to believe that in sarcoma his researches might be more successful. He hoped to be able to give more particulars at next year's Congress.—Dr. Lassar (Berlin) showed patients with cancers of the skin treated successfully by Fowler's solution.—Professor von Bergmann (Berlin) declared these cases to be not cancers but adenomata of the sebaceous glands. Patients with cancers had very often come to him to be operated on soon after an apparent cure had been effected by Dr. Lassar's method. The growth is then usually much larger, and its removal becomes more difficult than it would have been if the previous arsenical treatment had not been undertaken.—Professor Kocher (Berne) said that the effect of arsenic was only of short duration.—Professor König protested against the publication of methods which have the effect of causing operations to be deferred until too late.

The Diagnosis of Syphilitic Growths.

Professor von Esmarch (Kiel) called the attention of the meeting to Sarcoma-like Syphilitic Growths. Sarcomatoid tumours occurring in patients with other syphilitic symptoms, and very soon reappearing after extirpation, are to be regarded as probably syphilitic. Tumours in the muscles of patients suffering from deferred hereditary syphilis are gummatous in 90 per cent. of the cases. The diagnosis is difficult and only to be inferred from the results of anti-syphilitic treatment.

Tuberculosis of the Knee-joint.

Professor König gave a statistical account of the cases which he had attended in the University Hospital of that town. There were 725 patients suffering from this disease, but he had notes of only 615, of whom 410 (= 65 per cent.) have already died, the great majority (340 cases = 80 per cent. of the total deceased) having succumbed to tuberculosis. Conservative methods were employed for 184 patients; in 150 arthrectomy and in 300 typical resection were performed, and in 91 amputation became necessary. In numerous instances iodoform or carbolic acid was injected into the joint, and in many of these cases operations had to be afterwards performed. He had found, contrary to the experience of other surgeons, that injections of carbolic acid gave a better result than injections of iodoform, the power of moving the joint having been regained by thirteen out of forty patients treated with iodoform, and by twenty-one out of thirty-six treated with carbolic acid.

Ambulatory Dressings in Fractures of Thigh and Leg.

Professor von Bardeleben (Berlin) said that the ambulatory method of Hessing is now much simplified, the former complicated and rather expensive apparatus being replaced by plaster dressings only. The broken bone is put on a splint till the swelling has reached its acme, and then a very well-fitting plaster dressing is applied, which, being supported by the prominences of the malleoli and the pubic bone, keeps the ends of the broken bone in apposition. A few days after the injury the patient may try to walk and nearly always succeeds in so doing. During last year thirty-nine out of forty-five fractures of the leg and sixteen out of twenty-three

fractures of the thigh were treated in this way. The method, of course, requires constant attention and supervision, and is therefore only possible in hospital.

Appendicitis.

Professor Czerny (Heidelberg) said that the mucous membrane of the vermiform appendix often became abraded by fæcal concretions, and that bacteria easily penetrated into the small ulcerations caused thereby. Appendicitis, when acute, may arise from the presence of bacterium coli, and when chronic from the tubercle bacillus or actinomyces. Patients who had to all appearance recovered spontaneously were apt to suffer at a later stage from severe pains, constipation, vomiting, &c., and the appendix had often to be removed afterwards. The prognosis is good, those cases excepted where the appendix is fixed by agglutination to the surrounding tissues.—Professor Krönlein (Zürich) remarked that he had sometimes seen a fæcal fistula follow this operation.—Dr. Körte, Dr. Israel, and Dr. Rotter confirmed this statement.

The After-treatment of Laparotomy.

Dr. Reichel (Würzburg) said that formerly opiates were invariably given after laparotomy, but that at present even laxatives were prescribed in order to remove pyogenic bacteria and their products. Opiates should not be given after simple operations, but they were useful in cases where the intestines were irritated or loosened during the operation; also when symptoms of slight ileus appeared opiates should be tried at first, and if the symptoms do not disappear very soon the peritoneal wound should be opened up. Hæmorrhage and peritonitis after the operation also require the peritoneum to be reopened.

SITTING ON APRIL 20TH.

The Sterilisation of Catgut.

Dr. Lauenstein (Hamburg) said that he had found several kinds of bacteria in catgut sold as sterilised. He especially mentioned bacillus subtilis, staphylococcus albus, and micrococcus tetragonus. Suppuration, he was sure, often arose from catgut sutures. In thirty-five out of 149 specimens of catgut he was able to cultivate the bacteria on gelatine. Most germs were present in catgut sterilised by a dry process.—Professor Kocher stated that in his operations for goitre primary union was obtained in only 35 per cent. of the cases when sterilised catgut was used, but in 85 7 per cent. when sterilised silk was used. He has now completely abandoned aseptic sutures, and only employs silk made antiseptic by an alcoholic solution of bichloride of mercury. Since adopting this method he has obtained primary union in every case. The question being very important Professor Kocher suggested the making of a collective investigation, and his proposition was adopted.

Anæsthetics: the Collective Investigation.

Professor Gurlt (Berlin), the secretary of the Congress, read the report on the above subject. The collective investigation has now been going on for five years. This year 52,677 new cases were reported, of which 31,803 were chloroform narcosis with 23 deaths, and 15,712 were ether narcosis with 5 deaths. In 2148 cases narcosis was produced by a mixture of chloroform and ether, in 1554 by the so-called Billroth mixture, in 1425 by ethyl bromide, and in 34 by penthal. The use of ether has much increased. The mortality from chloroform seems to be much greater than that from ether; but very often grave disorders of the respiratory organs, such as pneumonia and bronchitis, result from the inhalation of ether, and death from those complications ought to be regarded as equivalent to death under anæsthetics. Ether was especially harmful after laparotomy.—Dr. Schleich (Berlin) explained his theory of the action of anæsthetics. According to him they are more dangerous the more their boiling points differ from the temperature of the body. He has devised an anæsthetic mixture (chloroform and petroleum ether) whose boiling point is the same as the temperature of the body, and states that he has obtained excellent results, all the disagreeable symptoms (vomiting, &c.) being absent.—Dr. Rosenberg (Berlin) recommended that the mucous membrane of the nose should be brushed with a solution of cocaine before the commencment of the narcosis.—Dr. Rehn (Frankfort) gave a warning against the use of chloroform near a gas-light, as ethylene chloride is formed.

The Agglutination of Serous Membranes.

Dr. Graser (Erlangen) said that when two serous membranes are put together the agglutination can be divided into three stages. In the first a small exudation of fibrin takes place, in the second the exudation is increased and the endothelial cells diminish, in the last stage these cells completely disappear and a thick fibrinous stratum lies between the membranes. This fact is in accord with Alexander Schmidt's opinion that fibrinous exudation is always connected with a lesion of the cells. All antiseptic preparations influence the cells and consequently are apt to accelerate the agglutination of serous membranes.

Vaginal Hysterectomy.

Professor Landau (Berlin) submitted a report on Vaginal Hysterectomy after Péan's method.

Resection of the Rectum.

Dr. Schede (Hamburg) described this procedure for the relief of syphilitic stricture. He has performed fourteen such operations, of which twelve were successful. In two cases the operation could not be completed, the ulcers being too high above the anus. This operation is much more difficult than that for carcinoma, but he nevertheless prefers it to colotomy.

At the last sitting Professor von Bergmann was elected President for next year, when the twenty-fifth anniversary of the Congress will be celebrated with great distinction. Professor Thiersch (Leipzig) whose lamented death is recorded in another column, was appointed an honorary member. The attendance of surgeons was much greater than at any of the former meetings, and the company included two well-known British surgeons, Professor Alexander Ogston (Aberdeen) and Mr. Arthur Barker (London).

THE ROYAL SOCIETY CONVERSAZIONE.

IT was evident from a glance at the exhibits at the annual soiree of the Royal Society, held on Wednesday last, that the work of the past scientific year had been allocated chiefly and equally to chemistry and electricity. Indeed, the exhibition of 1895 may be regarded as affording a striking instance of the overlapping of these two sciences, and of how every year they are becoming more and more locked up in each other. To the analytic power of electricity, for instance, was largely due the discovery of argon, and the knowledge of the existence of argon led to the discovery of helium, so that in less than six months two most important members have been added to the chemist's list of elements by the aid of this mysterious and marvellous force. The exhibition of helium and argon was naturally expected by everyone, and no one could have been disappointed, for Professor Ramsay was able to show the spectra of argon extracted from air, and also of a mixture of argon and helium extracted from the Norwegian mineral, clèveite. An exceedingly pretty experiment was shown by Professor Roberts Austen of the Mint, consisting of an ingenious arrangement by which the effect of the enormous heat of the electric arc upon refractory metals could readily be seen projected upon the screen. Thus the melting of chromium and other refractory metals in the electric furnace was demonstrated. The temperature for this purpose approaches 3000 C. The chief point of interest in the exhibit of the metals of the platinum group by Messrs. Johnson Matthey and Co. lay in the fact of the great value of the separated metals. Thus a native platinum nugget weighing 158 grs. was on view, while close by it was a palladium ingot 1000 grs. in weight and of the value of £7000, which had been separated from an amount of gold and platinum of the value of two and a quarter millions of money. Oddly enough, Professor Lewes's exhibit illustrating the preparation of acetylene gas (240 candle power) from calcic carbide by merely acting upon it with water, and which is obtained by fusing carbon and lime together in the electric furnace, stood side by side with the interesting specimens collected by Major Cardew in connexion with the recent street explosions caused by electric mains. Specimens of the deposit containing sodium and potassium were shown. Of interest to medical men was the electrical cabinet for use in the wards of a hospital exhibited by Sir Benjamin Ward Richardson. The cabinet contains, in a comparatively small space, all that is required in the wards of a hospital. It is easily movable from bed to bed, and supplies, as required, a continuous and measurable current, an intermittent

current, a light with reflector for illuminating the throat, and an electric cautery. It is also furnished with a Hughes' electric balance to serve as an acoumometer. The current may be supplied from the main which lights the hospital. The cabinet has been constructed by Messrs. Faraday and Sons, under the direction of the exhibitor, for the use of the London Temperance Hospital.

The possibility of the transmission of infection by flies was admirably demonstrated in the series of cultures by Mr. W. T. Burgess. In his experiments flies were placed in momentary contact with a cultivation of *bacillus prodigiosus* (or other suitable chromogenic organism) and allowed to escape into a large room. After some time they were recaptured and caused to walk for a few seconds over slices of sterile potatoes, which were then incubated for a few days. The experiments showed that the flies' tracks on the potatoes were marked by vigorous growths of the chromogenic organism, even when the flies spent several hours in constant activity before they were recaptured. The use of pathogenic organisms in these experiments would be attended with obvious dangers, but the result obtained with harmless microbes indicate the constant risks to which flies may expose human beings, and the necessity of preventing their entrance and subsequent exit in infectious wards was emphasised.

Other exhibits that should be noticed in our columns were the drawings of enlarged finger-prints by Mr. Francis Galton, F.R.S., illustrating the foundation of the finger-print method lately adopted in the police department for ascertaining, first, whether an unknown and unsuspected person is an habitual criminal; and, second, for verifying doubtful identity. Lastly, a living specimen of the *melapterurus electricus* from the River Senegal was shown by Professor Gotch, and during the evening the shocks of this extraordinary animal were conveyed by means of placing the fish in a net lined with tin-foil to several of the company present, while the disastrous effect of the contact of this electric fish with gold fish was also shown. Among the large company received by the president, Lord Kelvin, in the reception room were the Duke of Saxe-Coburg and Prince Alfred of Saxe-Coburg-Gotha, the French Ambassador, the Marquis of Salisbury, and, it need hardly be added, most of the leading representatives of the various branches of science.

SANITATION AT BELGRADE.

IT will be remembered that when the International Congress of Hygiene and Demography met at Budapest last year an excursion to Belgrade and to Constantinople was organised. We described at the time the enthusiastic reception given to the congressists at Belgrade and the eloquent speeches made in favour of sanitary reform. So cordial was the reception and so eager did the local authorities and public seem to be in the cause of sanitation that, on returning from Constantinople, our representative again stopped at Belgrade, and was thus able to forward us some account of the sanitary condition of that city.[1] The Servian press gave the fullest possible publicity to our criticisms. This propaganda work has borne good fruit. Schemes of drainage that had for long remained dormant were brought out from among the municipal pigeon-holes, and an engineer, M. Maresch of Graz, was engaged to go over these plans and devise if possible a new and better combination. This done, the municipality determined to submit these different schemes to a small committee of experts, and selected for that purpose firstly Mr. W. H. Lindley, chief engineer of the Public Works Department at Frankfort-on-Main, who enjoys a European reputation and is the author of the drainage schemes of several large towns; as the drainage scheme must be combined with the construction of embankments to protect the town from the danger of flooding, Professor Zschokke of Zürich, who has built embankments and docks at Rome, Genoa, La Rochelle, Bordeaux, &c., was the second expert chosen to deal with the sanitary interests of the town in a less technical but in a broader and general sense; whilst Mr. Adolphe Smith was selected as the third expert. These gentlemen met in Belgrade during the course of April and examined the plans submitted. There were in all three plans—one submitted some years ago by an engineer from Berlin, another by an engineer from Mannheim, and, finally, the modifications and alterations of these plans by M. Maresch. The examination of these schemes by the committee of experts has, practically speaking, resulted in the drawing up of a fourth plan. Without entering upon the many details and complications involved by this problem, it may be briefly stated that Belgrade is, for the most part, built on a promontory overlooking the Save and the Danube. The greater part of this promontory consists of a hill some 300 feet high, with ample falls towards the Danube or the Save; but at the base of this hill there is on both sides a strip of low-lying ground which represents about 30 per cent. of the total area it is proposed to drain. To further complicate the situation the level of the water in both rivers varies very considerably according to the time of year, so that a system of drainage which is possible at one season is impossible at another. A height of 66·24 metres above the level of the Adriatic is the zero of the Save. The lowest water-mark ever known there has been 45 centimetres below this zero and the highest water-mark 8 metres above—at least, this was the height attained during the floods of 1888; but this year the record has been beaten to the extent of 2 centimetres, and this while the committee of experts was sitting, so that they were themselves able to see the maximum difficulty known to history. The water then attained the level of 74·26 above the Adriatic, or 8·02 metres above the zero of the Save. If we consider that the sewers and drains must be laid deep in the earth so as to prevent freezing during the very rigorous weather of the winter, houses should not have been built at a lower level than 80 metres, whereas a vast number are on levels of 70 to 72 metres. The drains of these quarters will, therefore, be below the high water-mark.

The municipality entertains strong objections to any sewer outfalls on the Save side, where it is intended to establish bathing stations and where the back currents caused by the Danube might drive the sewage back upon the town. M. Maresch had conceived the bold idea of piercing a tunnel through the hill on which the greater part of Belgrade is built so as to deliver the sewage of the Save side into the Danube. The committee of experts endorsed this proposal, but suggested that the tunnel should be deeper and longer so as to take all the sewage of the Save side. On the other hand, at this depth the outfall will for about sixty days of the year be too low to empty into the Danube. At a height of 80 metres there will be main sewers collecting all the sewage from the high parts of the town, and these can empty into the Danube at all conditions of the water. During the sixty days it will be necessary to pump up the sewage from the low-lying levels into this higher level system. Such, in a few words, is the method proposed for overcoming the local topographical difficulties. The committee of experts further indicated what methods of drainage should be applied to connect the houses with the sewers, and what by-laws should be enacted so that these works might be properly controlled and rendered efficacious. The plans submitted were all based on the combined system—that is to say, on the admission of rain water into the sewers, with the necessary overflows for storm water. It is perhaps unfortunate that there was no scheme on the separate system, by which the sewage and the rain water would be dealt with separately, for it would have been interesting to see what advantages this rival system could have offered in the peculiar circumstances under which Belgrade is situated. The plan proposed, however, is simple, devoid of complications, and easily applied. It is calculated that the study of the details will take a year and the construction of the sewers about five years. Thus in five or six years Belgrade may become in this respect a model town of Eastern Europe. How greatly this will be to the credit of the capital of Servia can only be realised by those who know something of Servian history. It must be remembered that Servia only acquired its independence when the Turks left Belgrade in 1867. Thus this town has not had more than twenty-eight years of free municipal existence. Even then Servia continued to pay tribute to the Sublime Porte till the war of 1876 broke out. The Pashalic of Nisch was only obtained through the Berlin Treaty in 1878, and Servia was not proclaimed and recognised as an independent kingdom before 1880. These dates show that Servia is a totally new country, and yet it is already eager to carry out proper drainage works and to enforce the most progressive sanitary principles. How many much older countries have failed to show such a practical appreciation of sanitation?

[1] Vide THE LANCET, Dec. 22nd and 29th, 1894.

THE ROYAL ACADEMY.

THERE is a curious want this year of really great pictures. An uninteresting evenness pervades the galleries, and some would say that the average is high. This is true in a sense, for examples of bad drawing are few and are confined for the most part to the works of the Academicians. Composition, too, with the same exception, has been successfully studied. In two particulars only is there no improvement. Colour is, if possible, more inharmonious than ever, many of the more important pictures—as, for example, the President's "Flaming June" and Mr. Tadema's "Spring"—being particularly noticeable in this respect. The choice of subjects is equally unfortunate, the number of death-bed scenes—all, fortunately, as unlike the real thing as possible; the number of children at their mothers' knees, of allegories—with ghosts, angels, or fairies, as the case may be; and of Andromedas, Ariadnes, Judgments of Paris, and other classical subjects, being positively monotonous. There appears to be very little sculpture this year, though there are two or three of the nude figures which, if we mistake not, Mr. Onslow Ford made the fashion a few years ago. He exhibits an attenuated girl in bronze, very well modelled, but very ill-nourished, and entitled "Echo." Mr. Thorneycroft's recumbent figure of the late Bishop of Carlisle should not be overlooked. There is a curious drawing which looks like tapestry in the sculpture room. It is one of Mr. Richmond's designs for the decoration of St. Paul's (1713). The water-colour room is well filled, and we observe a very clever portrait by Mrs. Jopling (914); a curious, highly finished "Cinderella," by Mr. Southall (962); and "Quietude," an eccentric study of a head, with Dürer's "Melencolia" as a background, by Mr. Lucien Levy (971). "An Alien," a lovely figure, highly finished, but very small, is by Mr. Bulleid (1024). Mr. Clifford makes a new departure in his "Bric-à-brac Shop" (1082).

If we take the galleries in order, omitting portraits, we shall find three or four pictures worth looking at in the first. These are "Spring," by Cecil Rea (38); "Evening," by Mr. Leader; "St. Stephen," by Sir J. E. Millais (18); and "The Fisherman and the Jin," by Mr. Prinsep (25). "The Pot of Basil," by J. L. Gloag (53), is powerful enough but too eccentric, and Isabella cannot have the normal number of vertebræ in her spinal column. In the second room we find Mr. Waterhouse's "St. Cecilia." She is represented in a "walled city on the sea," asleep with two angels playing before her. The artist has experimented and striven with all his might to attain harmony of colour, but has failed, yet his picture in many ways deserves its "place of honour." Mr. Byam Shaw errs in the same manner, but less completely, and his scene from the "Blessed Damozel" (110) has some of the richness of a manuscript illumination. The President's "Maid with the Golden Hair" (139) is pleasing and very complete. Mr. Storey's "Coming Events" (40) has his usual prettiness and the landscape part is good, but not so good as in his "November Sunshine" (81).

In the Great Room the place of honour is filled by Mr. Briton Rivière's "Phœbus Apollo" (160) driving a team of lions in a chariot. We question if he will ever succeed in getting back the foot and leg he has extended over the front of the chariot, but the whole picture is brilliant and spirited to a rare degree. "Ruth" (225) and "Rachel" (216), by Mr. Goodall, are much alike in hardness and dull colouring, but are correctly drawn. It is not possible to praise the picture of an ugly, bloated boy, with a crooked mouth, which Mr. Watts labels "The Outcast: Goodwill" (258), nor is it possible to make out the meaning of the name. There are several fine landscapes in this room, but both Mr. MacWhirter's and Mr. Peter Graham's suffer from woolliness. "Glen Orchis" (201), by Mr. Henry Moore, will be admired, as will two views by Mr. Hook, and Mr. Brett's reminiscence of his native cliffs (232), which is rather spoiled by a spotty foreground. We should also notice the President's graceful "Lachrymæ" (182), and Mr. Poynter's charming little "Ionian Dance" (270), is both well drawn and well finished.

There is little to delay us in the fourth room, but "A Priestess," by Mr. Godward, is firmly handled and not without beauty (304). In the fifth gallery we may pause at Mr. Brett's "Isles of the Sirens" (409) and at Mr. Shannon's cold and unpleasantly anæmic Portrait of a Lady (410). In gallery six there is a tremendous and overpowering painting by Mr. Herkomer, representing a Bavarian Burgomaster and his Councillors, life size (436). In gallery seven we see Mr. Croft's picture of Napoleon Cheering on his Troops at Waterloo (499). "The Bayswater 'Bus," by Mr. George Joy, is clever, and includes some pretty faces, but there are obvious difficulties in the view. "Evening Glow" (534) is one of Mr. Leader's best pictures this year, though the trees and the watery meadows have so often done duty before. In the eighth gallery we have a fine sea piece by Mr. Somerscales, "After the Gale: Taking to the Boats" (593), but Mr. Wyllie in a large painting fails to make the Tower Bridge picturesque (611).

In the ninth gallery we have the usual show of small works this year by Messrs. Moore, Dillon, Logsdail, Gow, Mrs. Alma-Tadema, and Miss Montalba. In the next room is a pleasant "Offer of Marriage," by Mr. Sadler (776), and a curious but powerful Interior of a Joss House, by Mr. Wetton (761). In the eleventh gallery we must pass over Lady Butler's "Scots Greys on the Morning of Waterloo" (853), and a battle piece by Mr. Caton Woodville (869), and go on to a very powerful Snow Scene by Mr. Farquharson (873). "Toddy at the Cheshire Cheese," by Mr. Dendy Sadler (887), represents a cleverly painted group of old topers, and is in the artist's best style.

A longer and more careful examination than we have had time to bestow on this year's exhibition will no doubt reveal much that we have missed, but the foregoing notes give only the impressions of a first glance.

CITY HOSPITAL, BIRMINGHAM.

ON the invitation of the chairman of the Health Committee, Alderman Cock, a number of gentlemen interested in the sanitary condition of the borough attended at the site of the new hospital at Little Bromwich on April 24th. So many responding to the request, it was found necessary to organise the visitors into three parties, under the guidance respectively of Alderman Cook, Alderman Dr. Barratt, and Mr. Councillor Lancaster. About 180 were present, lunch being provided by the chairman, whose practical knowledge, sound judgment, and constant attention have contributed largely in making the new scheme successful. The present hospital may be looked upon as one of the most perfect of its kind, replete with every modern arrangement and appliances of the most recent kind; indeed, no efforts or money have been spared to bring it to a degree of completeness which will justify the labour spent upon it. Appended is a plan of the hospital with explanatory notes taken from the programme of the day's proceedings.

The hospital has been erected for the treatment of small-pox cases. It is situated on the east side of the city, about three and a quarter miles from the centre of the town and about 500 yards from the city boundary. The site is about twenty-four acres in extent.

A. Entrance lodge, a red brick building relieved with stone, with half-timbered gables, a covered porch, and a vestibule communicating on one side with a reception-room for visitors or others making inquiries, and on the other with the porter's residence and yard, from which access to the gas and water meters is obtained.

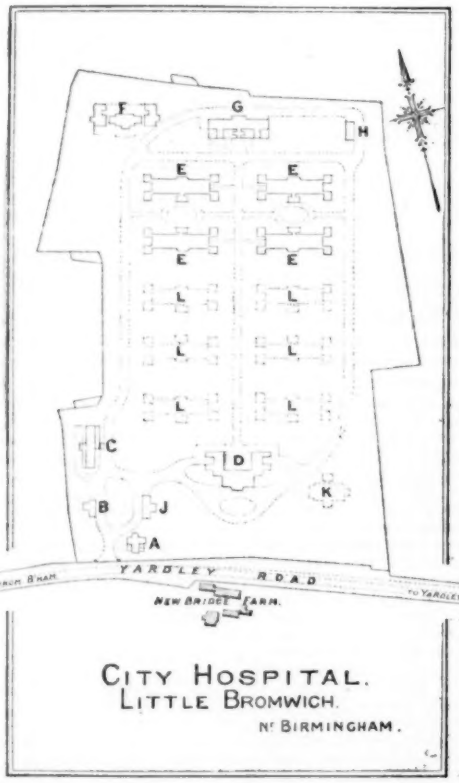
B. Receiving ward. This consists of a single room, with a bath-room leading therefrom, and a small enclosed yard and offices. Here patients are examined and stripped of their clothing, which is sent at once to the disinfecting stations to be purified before being placed in the store connected with the discharging ward. The patients are then taken either directly into one of the pavilions to undergo treatment, or if any doubt exists as to the nature of the case they are placed in the isolation pavilion and kept there for further observation.

C. The isolation pavilion is situated on a by-road; it is arranged for males and for females, and consists of a number of small wards with one, two, or three beds in each as required. The access to each ward is from the open air, but under a covered glass verandah. Special bathing and other sanitary arrangements are made, all securing perfect isolation.

D. Official and administrative departments. This block is divided into three sections, the central containing the medical quarters and matron's apartments, the left-hand side

containing the steward's apartments and stores, messroom kitchen, and kitchen yard, and the right-hand side containing the servants' accommodation, recreation room, matron's stores, and the officers' laundry. The various departments are so arranged in this block that, whether stores, food, or medicines are required, they are delivered from the lobbies on either side to the attendants or nurses, and conveyed by them directly down the asphalt avenue to the pavilions or other blocks, the person conveying it not requiring to enter this building beyond the serving window. In this block, too, in the lobby leading to the officers' quarters, is placed the telephone, by which communication can be made with the various blocks, and also with the Council House and the general telephone system of the city.

E. The pavilions are four in number. Each has twenty-four beds and consists of two wards 72 ft. by 30 ft., with an allowance of air space to each patient of over 2000 cubic feet. At the ends of the wards are the bath-rooms and water-closets, fitted up with the latest sanitary improvements. Between and connecting the two wards which constitute each



pavilion is the entrance hall, with a duty-room overlooking each ward; also food, pantry, linen, fuel, stores, &c. The wards are heated by open-fire, down-draught stoves, the bath and watercloset blocks being heated by high-pressure radiators from the steam mains. The floors are laid with oak blocks polished with hard paraffin and turpentine. The lighting is effected from the ceiling, the products of the combustion being kept entirely out of the wards.

F. The servants' quarters and cottages for the out-door officers contain kitchens, general sitting-rooms, &c, and a small bedroom. Each one is thoroughly heated, lighted, and ventilated.

G. Laundry, &c.—At the extreme rear of the centre of the site are situated the laundry and disinfecting yard with incinerator, perfect isolation being preserved. The steam disinfector is of the Washington Lyons type. In the process of disinfection the articles are taken to the yard on the infected side and placed in the jacketed steam receiver. This is closed up and steam at 20 lb. pressure is introduced. The steam is then exhausted, and the jacket, which is superheated, immediately evaporates all the moisture. The receiver is opened on the disinfected side, the articles being withdrawn thoroughly dry and forwarded to their various destinations. The only means of communication between the infected and the disinfected sides is a glass pane through which the attendants can communicate by speaking loudly. The lower level of this part is apportioned to the engineer's shopping, boilers, coal stores, storage, stabling, ambulance house, &c.

H. In the far corner of the site, on a side road, are placed the mortuary and post-mortem room, fitted up with all the necessary appliances.

J. Discharging ward. This is a small two-storeyed building, with necessary dressing- and bath-rooms. On the first floor, approached by an external doorway, is the clothes store, in which disinfected clothing is stored until required by outgoing patients.

The dotted block *K* shows the proposed position of the nurses' home; and the blocks marked *L* show where additional pavilions can be erected if necessary.

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN ordinary comitia of the College was held on April 25th, Sir J. Russell Reynolds, Bart., President, being in the chair.

John Henry Bryant, M.D. Lond., Louis Leopold Jenner, M.B. Oxon., Theophilus Nicholas Kelynack, M.D. Vict., and William Barnett Warrington, M.D. Lond., were admitted to the Membership.

Licences were granted to 130 candidates who had passed the recent examinations of the Conjoint Board.

Communications were read from the Royal College of Surgeons of England reporting the proceedings of the Council of that body, and from the Secretary to the British Institute of Preventive Medicine asking the College to nominate a representative to its Council. The request was referred to the Council of the College for consideration.

The following Members nominated by the Council for the Fellowship were balloted for and duly elected:—Frederick William Andrewes, M.B. Oxon.; James Calvert, M.D. Lond.; William Radford Dakin, M.D. Lond.; William Heaton Hamer, M.D. Camb.; Frederic Harry Haynes, M.D. Lond. (Leamington); Patrick Manson, M.D. Aberd.; Francis George Penrose, M.D. Lond.; Robert Michael Simon, M.D. Camb. (Birmingham); Frederick John Smith, M.D. Oxon.; Frank Joseph Wethered, M.D. Lond.; Dawson Williams, M.D. Lond.

The quarterly report of the Finance Committee was received and adopted.

The report from the Committee of Management dealing with the subject of the examinations for the Diploma of Public Health and referred back to the committee at the last meeting was presented in an amended form and adopted.

In accordance with the recommendations of this report the Syllabus for Part I. of this examination will now be as follows, every candidate being required to undergo this practical examination in bacteriology:—1. Physics in their application to health; with reference to—(*a*) Warming and Ventilation; (*b*) Water Supply, Sewerage, and Drainage; (*c*) Sanitary Construction. 2. Meteorology in Relation to Health. 3. Chemistry, with special reference to Food, Air, Soil, and Water. 4. Microscopical Examination, as applied to Air, Food, and Water. 5. Bacteriology, including the cultivation and recognition of Micro-organisms. 6. Geology and Soil in Relation to Drainage and Water Supply. The course of lectures on Pharmacology and Therapeutics delivered by Dr. J. B. Bradbury, Downing Professor of Medicine at the University of Cambridge, was recognised as fulfilling the requirements of the Board. On the application of the Dean of the Faculty of Medicine of University College the course of Clinical Demonstrations in Lunacy, given by Dr. W. J. Mickle at the Grove Hall Asylum, Bow, was recognised so long as he shall hold the Lectureship on Mental Diseases in that College. The Dundee Royal Infirmary was added to the list of hospitals recognised by the Board.

A further report was received from the Committee of

Management, (*a*) indicating the range of the Third and Fourth Examinations under the new regulations; (*b*) recommending that every candidate be admitted to a separate examination in Ophthalmology at the Final Examination; (*c*) explaining the procedure adopted by the committee in dealing with applications for the recognition of institutions as places of instruction in chemistry, physics, practical chemistry, and biology; (*d*) recommending the recognition for such purpose of the Higher Grade Board School, Victoria-road North, Southsea; Wellington College, Wellington; the Grammar School, Bristol; and the Birkbeck Literary and Scientific Institution; (*e*) recommending the recognition of the course of instruction for the Diploma of Public Health at the Westminster Hospital; and (*f*) recommending that the City of London Hospital for Diseases of the Chest be recognised as a place of study during the fifth year of the curriculum.—The report was adopted by the College.

A report from the Laboratories Committee, detailing the work being carried on in the laboratories, was received and adopted.

The quarterly report of the Examiners for the Licence was received and adopted.

CHOLERA.

THE revitalisation of cholera at the present season, after the epidemic has been apparently dormant and hibernating, as it were, for some months, is an interesting and, as subsequent events may prove, a significant fact. As we have frequently said, cholera often makes its earliest manifestation towards the end of March and the middle of April, and so it has proved in the present year. We learn from St. Petersburg that 22 cases occurred, 13 of them fatal, in the province of Podolia, in Russia, between March 24th and April 13th, while in the province of Volhynia there were 112 cases and 36 deaths between March 17th and April 6th.

The outbreak of epidemic cholera among the Mecca pilgrims at the quarantine lazaretto of Camaran on the Red Sea is naturally giving rise to a good deal of anxiety in Egypt. The first cases were reported at the end of March, and the number of attacks had risen to thirty at the end of a week. As many as 11,000 pilgrims had passed through on their way to Djeddah, and the lazaretto was at the date of the last report occupied by some 2000 pilgrims. Within the next few weeks the bulk of the pilgrims will be returning, and it has been officially declared that the disease has broken out at Mecca. The chief of the Camaran lazaretto has proposed to the Supreme Sanitary Council in Constantinople to stop the pilgrimage from India and the Dutch Colonies, but the Sultan is, on religious grounds, opposed to this. It is worth remarking that the Indian authorities allege that the disease was not conveyed from that country, for the pilgrims were free from all disease when they embarked and no cholera appeared among them until after they had been quartered in the quarantine lazaretto at Camaran. There can be no doubt, if all that is said of it be true, that Camaran is a hotbed for developing the disease, and the present outbreak is attributed to the bad condition of the lazaretto, the overcrowding, and the impurity of the water supplied to the pilgrims there and *en route* to Mecca. A radical change is required at Camaran and throughout the province and at Mecca itself. It is understood that the present governor-general is instituting a number of sanitary reforms. We should like to hear that the Sultan had sent some sanitary expert from Europe or this country to advise as to the necessary measures to be undertaken. Cholera does not, as a rule, spread from Arabia and Egypt to this country, notwithstanding that it is the shortest route, and we are not apprehensive on that ground. As regards Egypt, if the disease spreads to and appears at Cairo we trust that no time will be lost in moving the British troops up to Mokattam, which was done with some of them on a previous occasion, with the result that those quartered there escaped the epidemic altogether. The difficulty about encamping troops there is the want of water.

Some vessels have arrived in the Thames with a history of having had cases of cholera or choleraic diarrhœa on board.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Fever in the Mold Urban District, by Dr. WHEATON.—Mold was evidently the subject of an official inspection because typhus fever was suspected at Whitehall to be prevailing there; but the disease was enteric fever, and it was found to exist under circumstances of filth and sanitary neglect which we hope, and feel sure, are very exceptional. The houses affected were often squalid and "extremely filthy" both within and without; in fact, the main burden of the descriptive portion of the report is as to filth in various forms and degrees, the whole making the reader wonder whether there could in such a place be anything corresponding to a sanitary authority, sanitary administration, and sanitary officers. The only relief to this part of the story is the statement that the medical officer of health, with the aid of the Poor-law authority, turned some of the affected dwellings into hospital, nurses' home, and mortuary respectively, and that this action taken in the emergency is credited with having had much to do in staying the further diffusion of the infection of this "filth disease." Mold has for several years past suffered from enteric fever. It cannot be attributed to its water-supply, neither was it found to be due to milk. Indeed, Dr. Wheaton comes to the conclusion that emanations from defective sewers, and midden-privies infected by reason of having received the discharges of some of the sick, together with the generally careless habits of the people, such as is almost everywhere found where the surroundings of people are filthy, were the real cause of the spread of the disease. Since a previous official visit in February, 1894, the authority have applied for a loan for the purposes of a system of sewerage, and it is to be hoped that when this is carried out a water-carriage system which will ensure the immediate removal of excreta from the neighbourhood of dwellings will lead to the initiation of some substantial improvements. But even before then gross nuisances, dwellings unfit for human habitation, and the like should be dealt with by the authority.

On a Prevalence of Enteric Fever at Desborough, by Dr. W. W. E. FLETCHER.—Desborough is a small urban district of some 2900 inhabitants near Kettering, and it has suffered severely from enteric fever. During 1890 and up to March, 1891, there were no less than 188 attacks, of which 23 terminated fatally, and from that time forward until late in 1894, when the medical officer of health reported a fresh prevalence, the disease has been all but epidemic. All the ordinary and all the possible causes of enteric fever were evidently looked into with care; but it is to the water-supply that Dr. Fletcher attributes the unhealthy and unfavourable state of Desborough. The wells are sunk in open and porous soil which rests on clay; they are filled in the main by surface water and by means of privy-middens and other sources of filth which admit of soakage into the same surface soil; the water-bearing stratum is constantly subject to fouling. The natural flow of the water has also conduced to the result, for in passing to the main body of the village it would wash along with it the soakage of filth from another part, and this latter part is that in which the first case of enteric fever occurred. In dealing generally with the sanitary administration of Desborough, Dr. Fletcher is able to point out that there are able but underpaid sanitary officers, whilst the authority is principally noted for negligence and indifference to the advice of their officers, and this notably in the matter of the need for providing a wholesome water-supply. They have no system of notification, they do not register cowhouses or slaughter-houses, and they avoid taking powers which it is optional with them to do without. Dr. Fletcher's report is well compiled, is clear and lucid, free from any approach to verbosity or undue length, and being a plain, simple story of the facts as elicited it ought to be appreciated by every member of the district council and to move them to act without delay, especially in regard to the question of water-supply.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Leeds Urban Sanitary District.—Dr. Spottiswoode Cameron's annual report for 1893 contains much interesting matter. He deals in a very detailed manner with the subjects of which he treats, and anything like a full review of the report our space will not permit. The position which Leeds occupies among the nine great towns of the United Kingdom, each with a population of 250,000, is, in the matter of general death-rate, a satisfactory one, coming as it does fourth on the list. The death-rate for 1893 was 22·3 per 1000, a rate in excess of that for the three preceding years, but which excess was more than accounted for by the increased number of deaths from measles and diarrhœa. When the Leeds death-rate is compared with English towns alone having at the last census populations of 250,000 and over, it is found that Birmingham is the only town which in 1893 had a rate less than Leeds; and in pointing out this fact Dr. Cameron pays a just tribute to the praiseworthy efforts of Birmingham to deal with her unhealthy areas. In the report before us the vital statistics of Leeds are discussed in considerable detail, and Dr. Cameron has endeavoured to arrive at a trade correction factor for the district. Part II. of the report deals with special diseases, and under each disease the time, age, and sex incidence are considered, as well as the sanitary condition of the invaded houses. Dr. Cameron gives a very interesting account of the progress of small-pox in Leeds during 1893 and of the isolation accommodation provided for the cases. The old small-pox hospital was, on the erection of a new temporary hospital, intentionally burned down; there was, it appears, some suspicion that the hospital was acting as a focus for the spread of the disease. Persons exposed to the infection of small-pox were isolated in a cottage shelter belonging to the corporation, and out of 1458 persons so housed 83 developed small-pox within a fortnight. The following figures, showing the attack-rate amongst those isolated at the shelter, are instructive. Of 129 cases in which there was no evidence of either vaccination or primary small-pox 18 per cent. developed the disease, while of 1196 who showed some signs of vaccination only 5 per cent. did so. Of 40 who had previously had small-pox none were attacked, while of 93 persons concerning whom no information was forthcoming 3 developed the disease. In discussing the influence of vaccination upon recovery among the 586 cases passing through the hospital in 1893, Dr. Cameron states that the mortality among 42 said to have been vaccinated, but showing no marks, was 9·5 per cent., among the "unvaccinated" 28·2 per cent., among the imperfectly vaccinated 5·3 per cent., and among 257 cases who showed signs of having been properly vaccinated *nil*. The influence of the number of cicatrices is shown below in a table drawn up by Mr. A. E. Pearson, resident medical officer to the City Infectious Hospital:—

Showing the Number of Visible Vaccination Cicatrices in each Case, the Number of Deaths, and the Mortality per cent.

—	Cases.	Deaths.	Mortality per cent.
Six cicatrices	3	—	Nil.
Five cicatrices	2	—	Nil.
Four cicatrices	89	—	Nil.
Three cicatrices	144	3	2·0
Two cicatrices	184	4	2·1
One cicatrix	76	6	7·8
No cicatrices	88	17	19·3
Total	586	30	5·1

Dr. Cameron has made a most exhaustive analysis of the deaths from diarrhœa in Leeds during 1893, and we strongly recommend this part of the report to the notice of our readers. The conditions of the houses in which fatal attacks occurred have been thoroughly gone into, and it appears that 79·8 per cent. of the fatal cases were attacked in houses without a through draught. It is shown, too, that "fatal diarrhœa occurred disproportionately in the smaller dwellings, and that amongst them it selected as a rule those most crowded." We are unable to touch upon all the interesting points raised by Dr. Cameron, but we reproduce a table with regard to the feeding of infants and diarrhœal mortality, which we feel sure will be of interest.

Showing in percentages, as to Deaths specially inquired into, the Mode of Feeding of 153 Infants under one year of age, whose Deaths were registered as due to Diarrhœa in the Six Weeks ended Sept. 30th, 1893.

Ages.	Cases inquired into.	Per cent. of the 153.	Percentages of those dying at different ages fed— On mother's milk only.	Partly at breast.	Not at breast at all.	By bottle.	Both at breast and bottle.
0 to 3 months	41	27	24	20	56	71	17
3 to 6 months	55	36	16	13	71	76	11
6 to 9 months	34	22	3	9	88	91	9
9 to 12 months	23	15	30	17	52	61	8
Whole	153	100	18	14	68	76	12

Dr. Cameron has for several years past amassed a vast number of details in regard to the sanitary condition of houses invaded by infectious disease, and the results must one day be of the greatest value in attempts to arrive at legitimate deductions.

Coventry Urban Sanitary District.—The infantile mortality of Coventry continues, Dr. Mark Fenton reports, to be a high one, and there has been no improvement in the rate during the last twenty years. Sanitary science has not yet, he observes, seriously applied itself to the reduction of infantile mortality. In discussing the value of school closure in measles epidemics, Dr. Fenton states that the closing of schools in Coventry has been invariably followed by a marked and significant reduction in the number of cases notified. As instancing this statement the following table for 1894 is given:—

Weeks ending March		Weeks ending April				Weeks ending May		
24th*	31st*	7th*	14th*	21st†	28th†	5th†	12th†	19th†
162	213	275	492	306	260	134	88	42

* Open. † Closed.

The school in this instance was closed late in the week ending April 14th. As further corroboration of the value of school closure Dr. Fenton supplies figures for 1886 and 1889.

Cases of Measles recorded in 1886.

January to August	81	
September	361	Schools opened.
October (first fortnight)	186	
October (second fortnight)	111	Schools closed.
November	10	

Cases of Measles recorded in 1889.

January to June	186	
July 1st to 25th	629	Schools opened.
July 25th to Aug. 10th	218	
Aug. 10th to Sept. 1st	74	Schools closed.
September	17	

In Coventry measles is notifiable, but it appears that the sanitary committee have recently been considering the desirability of discontinuing the notification of this disease, owing to the fact that school closure alone has been found effectual in staying the spread of the disease. Dr. Fenton, however, has well advised the committee that until they are in a position to test the effect of isolating the first notified cases in hospital, it can hardly be concluded that notification is of no value.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6734 births and 3829 deaths were registered during the week ending April 27th. The annual rate of mortality in these towns, which had declined in the seven preceding weeks from 35·0 to 20·3 per 1000, further fell last week to 18·9. In London the rate was equal to 17·9 per 1000, while it averaged 19·5 in the thirty-two provincial towns. The lowest rates in these towns were 10·4 in Croydon, 11·3 in Swansea, 12·7 in Cardiff, 13·0 in Derby, and 13·5 in Bristol; the highest

rates were 27·4 in Wolverhampton, 27·6 in Manchester, 28·7 in Norwich, 29·2 in Preston, and 29·3 in Bolton. The 3829 deaths included 327 which were referred to the principal zymotic diseases, against 330 and 336 in the two preceding weeks; of these, 111 resulted from whooping-cough, 85 from measles, 50 from diphtheria, 39 from diarrhœa, 24 from "fever" (principally enteric), 18 from scarlet fever, and not one from small-pox. No fatal case of any of these diseases occurred last week in Swansea or in Birkenhead; in the other towns they caused the lowest death-rates in Bristol, Portsmouth, Huddersfield, and Bradford, and the highest rates in Liverpool, Burnley, Manchester, Plymouth, and Bolton. The greatest mortality from measles occurred in Sheffield, Manchester, Plymouth, and Bolton; and from whooping-cough in Plymouth, Wolverhampton, Liverpool, Bolton, Blackburn, Preston, and Burnley. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 50 deaths from diphtheria included 27 in London, 5 in Manchester, and 4 in West Ham. No fatal case of small-pox was registered either in London or in any of the thirty-two large provincial towns. There were 37 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, April 27th, against 53, 47, and 35 at the end of the three preceding weeks; 12 new cases were admitted during the week, against 7, 9, and 4 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1469, against 1519, 1463, and 1514 on the three preceding Saturdays; 132 new cases were admitted during the week, against 143, 117, and 162 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 398 and 389 in the two preceding weeks, further declined to 341 last week, and were 24 below the corrected average. The causes of 46, or 1·2 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Leicester, Bradford, Newcastle-upon-Tyne, and in fifteen other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Bristol, Liverpool, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 24·7 and 21·7 per 1000 in the two preceding weeks, further declined to 20·6 during the week ending April 27th, but was 1·7 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 15·1 in Greenock and 17·1 in Edinburgh to 24·9 in Aberdeen and 25·6 in Leith. The 594 deaths in these towns included 26 which were referred to measles, 24 to whooping-cough, 13 to diarrhœa, 3 to scarlet fever, 3 to diphtheria, 3 to "fever," and 1 to small-pox. In all, 73 deaths resulted from these principal zymotic diseases, against 88 and 78 in the two preceding weeks. These 73 deaths were equal to an annual rate of 2·5 per 1000, which was 0·9 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had increased from 22 to 32 in the three preceding weeks, declined again to 26 last week, of which 8 occurred in Edinburgh, 6 in Glasgow, and 4 in Leith. The deaths referred to whooping-cough, which had been 30 and 17 in the two preceding weeks, rose again to 24 last week, and included 17 in Glasgow and 3 in Greenock. The 3 fatal cases of scarlet fever were within one of the number in the preceding week, and included 2 in Glasgow. The deaths from diphtheria, which had increased from 2 to 7 in the three preceding weeks, declined to 3 last week, of which 2 occurred in Glasgow, where the fatal case of small-pox was also recorded. The deaths referred to diseases of the respiratory organs in these eight towns, which had been 162 and 132 in the two preceding weeks, rose again to 145 last week, and exceeded by 38 the number in the corresponding week of last year. The causes of 32, or 5·4 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 29·2 and 29·7 per 1000 in the two preceding weeks, declined to 27·0 during the week ending April 27th. During the past four weeks of the current quarter the death-rate in the city has averaged 32·3 per 1000, the rate during the same period being 18·8 in London and 19·4 in Edinburgh. The 181 deaths registered in Dublin during the week under notice showed a decline of 18 from the number in the previous week, and included 4 which were referred to the principal zymotic diseases, against numbers declining from 12 to 3 in the four preceding weeks; of these, 1 was referred to small-pox, 1 to diphtheria, 1 to whooping-cough, 1 to "fever," and 1 to diarrhœa, but not one either to measles or scarlet fever. These 5 deaths were equal to an annual rate of 0·7 per 1000, the zymotic death-rate during the same period being 1·5 in London and 2·1 in Edinburgh. The mortality from small-pox and from "fever" corresponded with that recorded in the preceding week. The fatal case of diphtheria was the first registered within the city during the current quarter. The 181 deaths in Dublin last week included 18 of infants under one year of age and 58 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from those recorded in recent weeks. Eleven inquest cases and 6 deaths from violence were registered; and 61, or rather more than a third, of the deaths occurred in public institutions. The causes of 9, or nearly 5 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-MAJOR GRIER has been appointed Instructor at the Depôt, Medical Staff Corps, Aldershot, in succession to Surgeon-Major Tyrrell, whose time has expired. Surgeon-Major Reckitt has arrived at Jamaica and Surgeon-Captain McCormack has embarked for Sierra Leone. Surgeon-Captain Thacker has been posted to the Curragh, and Surgeon-Captain Green has been transferred from Birmingham to Dublin. Surgeon-Captain Corcoran has been appointed to the Eastern District on arrival from Malta.

ARMY MEDICAL STAFF.

Surgeon-Major-General James Davis is placed on retired pay; Surgeon-Colonel Francis Henry Welch, F.R.C.S. Eng., retires on retired pay.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Lieutenant Kilkelly to officiate in Medical Charge of the 4th Bombay Cavalry. Surgeon-Colonel Maunsell is posted to the Mhow District. Brigade-Surgeon-Lieutenant-Colonel Gallwey, on being relieved by Surgeon-Colonel Maunsell, returns to Bombay. Surgeon-Colonel T. Maunsell, A.M.S., to be Principal Medical Officer, Chitral Relief Force, vice Surgeon-Colonel W. T. Martin, A.M.S. Surgeon-Colonel W. D. Wilson, A.M.S., to be Principal Medical Officer, Secunderabad and Belgaum Districts. Brigade-Surgeon-Lieutenant-Colonel W. F. Burnett, A.M.S., to be Officiating Principal Medical Officer, Mandalay District and Chim Hills Command. Surgeon-Colonel S. B. Hunt to be Principal Medical Officer, Bangalore and Southern Districts. Surgeon-Colonel D. F. Bateman to be Principal Medical Officer, Madras District. Surgeon-Colonel F. H. Blenkinsop to be Principal Medical Officer, Rangoon District. Surgeon-Lieutenant G. S. McLaughlin, A.M.S., is appointed Staff-Surgeon, Lucknow.

NAVAL MEDICAL SERVICE.

The following appointments are notified:—Fleet-Surgeon: E. H. Saunders to the *Edinburgh*. Staff-Surgeons: A. P. Johnston to Chatham Hospital, George S. Smith to the *Blenheim*; R. F. Yeo to the *Nile*; J. Porter to the *Britannia*; H. S. R. Sparrow to the *Calypso*. Surgeons: J. Chambers to the *Minotaur*; R. F. Bowie to the *Britannia*; Alexander Maclean to the *Pembroke* additional; John D. Menzies to the *Halcyon*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain Hugh Ransom Bramwell, M.B., the Tynemouth Volunteer Artillery (Western Division, Royal Artillery), to be Surgeon-Captain.

VOLUNTEER MEDICAL STAFF CORPS.

The Manchester Companies: Surgeon-Lieutenant J. B. Mann to be Surgeon-Captain.

VOLUNTEER CORPS.

Rifle: 2nd Volunteer Battalion, the Gordon Highlanders: Surgeon-Lieutenant-Colonel W. R. Duguid resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the battalion on his retirement. 3rd Volunteer Battalion, the Royal Fusiliers (City of London Regiment): Surgeon-Captain E. G. Younger, M.D., resigns his commission. 2nd Volunteer Battalion, the Lincolnshire Regiment: Surgeon-Captain G. F. England to be Surgeon-Major. 1st Volunteer Battalion, the Cheshire Regiment: Ernest Richard Woody Spratly, Gent., to be Surgeon-Lieutenant. 2nd Volunteer Battalion, the Gloucestershire Regiment: Percy Trenavin Lunn, Gent,, to be Surgeon-Lieutenant.

THE ARMY MEDICAL STAFF.

In the second of the series of articles which are appearing in the *Times*, under the heading of "War Office Administration," allusion is made to the changes that have taken place in the medical service in connexion with those which were introduced—mainly in the late Mr. Stanhope's time—in various other departments of the army. Many of these changes in respect of the ordnance factories, artillery and stores, the late commissariat, Army Service Corps, &c. are passed in review and subjected to criticism of an adverse kind. The writer seems to think that the principal feature of the minor military changes of recent years is the destruction of professional *esprit de corps* and the allotment of duties inconsistent with proper training. As regards the Army Medical Staff, with which we are only concerned, it is stated that all have combatant titles, which are socially and officially misleading. It cannot be denied that the indictment is drawn up in sufficiently strong terms. "They [medical officers] may occasionally be seen drilling hospital attendants as if they were infantry soldiers, and their plea to sit on courts-martial will probably soon be admitted. Surgeons-major-general require medical officers attached in a staff capacity to act as the medium of communication between themselves and other departments; and when a heedless young regimental officer is liable to be officially reported for applying to his medical attendant the honoured title of 'doctor' it is clear that all proper professional pride is in danger of being lost. Even the essential requirement of a distinctive uniform has dropped out of sight, and an expert is needed to differentiate the Medical from the Army Staff. In striving to be what he is not the army doctor will inevitably fail in the exercise of his rightful, honourable, and indispensable functions. To fighting rather than to saving life his ambitions will tend. Meanwhile, the necessity for converting naval doctors into admirals, post-captains, and commanders does not appear to have yet arisen. Medical science in the navy does not seem to be a source of shame to its professors, who, moreover, wear distinguishing marks well understood by the navies of all foreign Powers." This represents, we may presume, the Horse Guards or military view; but the medical officers regard the matter from another and totally different standpoint. They allege that the only thing which confers any authority, power, or standing in the army is military rank, and that so long as they form part of the army and are not civilians it is necessary that they should possess it if they are to discharge their duties efficiently; that they were quite contented with "relative rank" until they were deprived of it and assured that its possession was merely nominal and valueless; while at the time when they were being dispossessed of all army rank purely military titles were being, or had already been, conferred upon all other departments and branches of the service whose functions were of a much less military nature and brought them less in contact with soldiers and army duties generally than was the case with medical officers. As regards the alleged or suggested incompatibility of military rank and title with professional zeal and merit, they regard this as a ridiculous assumption, and point to the organisation of the medical services of other nations—America and the Continent—in which medical officers possess such titles and fulfil all their professional duties with entire efficiency and satisfaction; and they add that, while it is easy to indulge in abstract notions of this sort, it is quite another thing to support them by facts. If there is a residuum of medical officers who yearn to be thought military and nothing more, and strive to conceal their medical titles, their conduct in this respect has no sympathy or support from right-minded men. The foregoing, as far as we can gather, is shortly the view entertained by the majority of medical officers, and it is but right that it should also be represented and considered when statements like those under review are being put forward.

THE ARMY MEDICAL STAFF AND INDIAN MEDICAL SERVICE: THE ENTRANCE EXAMINATION.

It is announced that in future candidates for the Army Medical Staff and Indian Medical Service will be required to make one-half of the total obtainable marks of the examination to qualify for admission into the Army Medical School, Netley, as well as one-third of the marks in the compulsory subjects of the examination. We understand that this new rule has been introduced in consequence of a falling-off in the quality of the candidates competing, and that on representations which have been made to them the Secretaries of State for War and for India have been pleased to introduce it. This regulation has, doubtless, been decided upon in the hope of obtaining better professional men for the services, but we cannot help feeling that it will not have the desired effect, and that the responsible authorities would have done better had they sought to attract better men to the services by rectifying some of the terms of service which now press heavily on the medical officer, foremost among which are the, in some ways, unsatisfactory conditions under which the officers of the Medical Staff are serving both at home and in India. We refer especially to the question of the unsatisfactory rates of pay which the junior ranks of both services are now drawing while serving in our Eastern Empire. We understand that the total obtainable marks at the London examination are 4600. Four thousand of these are awarded for the compulsory and 600 for the voluntary subjects of the examination. Referring to our past issues we find that since the appointment of the new board of examiners in 1893 five examinations have been held. At these examinations 60 men have qualified for admission as surgeons-on-probation for the Army Medical Staff, and 73 as surgeons-on-probation for the Indian Medical Service. Had these candidates been examined under the regulation now announced only 70 per cent. of the candidates for the Army Medical Staff would have qualified and 83 per cent. of the candidates for the Indian Service. We notice that since the appointment of the new board of examiners the marking has been on a lower scale than it was in old days, and we feel that this new rule may have far-reaching effects unless it be modified. Either the number of candidates who are considered to have qualified at the next examination will be a very limited one or the examiners will be obliged to be more liberal in the view they take of the candidates' answers, which will, of course, stultify the hoped-for result. The quality of the candidates competing is, of course, regulated by the advantages and the inducements which the services offer, and cannot in our estimation be altered by any rule passed by the authorities to raise the average number of marks to be gained by the candidates at the examinations.

THE COMMANDER-IN-CHIEF.

The subject of the appointment of Commander-in-Chief in connexion with the recommendations of the Hartington Commission has attracted much attention of late, and Mr. Campbell-Bannerman's reply to a question in the House of Commons on the subject last week received different interpretations. By many it was thought that when the present Commander-in-Chief retires his successor will be appointed for five years only and not permanently, whereas others were of opinion that the post itself will be altogether abolished. Mr. A. Morton returned to the subject this week, and in reply the War Minister said that it was not usual to decide such questions until the occasion for the decision arose. When it did he had no doubt that the Government of the day would consider the recommendations of the Hartington Commission. As regarded his own views they were embodied in a separate memorandum appended to the report of the Commission, and he had since seen no reason to alter them. Mr. Campbell-Bannerman did not concur, it will be remembered, in the proposal of the Commission to abolish the appointment of Commander-in-Chief, and was opposed to the creation of a Chief of the Staff as unnecessary and likely to prove disadvantageous rather than otherwise to the service. The Medical Department, like all the other branches of the service, is more or less interested in this question, for the head of the army shapes more or less its policy. That the Duke of Cambridge has attained a good age, and that he has retained the highest position in

the army much beyond the age at which officers of high rank with plenty of physical and mental vigour have been compulsorily retired, cannot be denied. One thing seems pretty clear, however—viz., that the present Commander-in-Chief has no intention of retiring.

ENTERIC FEVER IN THE ARMY.

We have so frequently referred to the prevalence and mortality of typhoid fever in the army, especially in that portion of it serving in India, in connexion with water-supply and filters, that we fear our readers must be weary of the subject; but it is one of extreme importance, and nothing should be neglected which seems likely to prevent or lessen the prevalence of this disease. There does not seem to be any doubt that the introduction of the Pasteur-Chamberland filter in the French army has been followed by a remarkable diminution in the amount of typhoid fever. The last report of the French Minister of War furnishes some very interesting and instructive information in this respect, which is altogether corroborative of the previous reports of M. de Freycinet on the same subject. It shows that there has been a progressive decrease in the amount of typhoid fever of late years owing to the extended use of these filters. The barrack filters in ordinary use in India are, as we have often said, worse than useless as regards the prevention of water-borne diseases, and no time should be lost, we think, in giving some trial on a large scale to the kind of filter that is used at present in the French army.

THE CASE OF SURGEON-MAJOR GARDNER.

With reference to the case of Surgeon-Major Gardner M.B., Army Medical Staff, who joined the service in 1894 and resigned his commission under exceptionally pressing circumstances in October, 1890, we understand that the War Office have decided to offer no opposition to his claim for reinstatement in Her Majesty's army, and that the motion for a reconsideration of the circumstances attending his resignation, which will be brought forward by Mr. Brynmor Jones when the Army Estimates are reached, will be supported by a number of members on both sides of the House.

INDIAN MEDICAL SERVICE EXAMINATION.

An examination for not less than twelve appointments to Her Majesty's Indian Medical Service will be held in London during the month of August next. It is notified that at this and future examinations no candidate will be considered eligible unless, in addition to obtaining at least one-third of the marks obtainable in each compulsory subject, he shall obtain one-half the aggregate marks for all the compulsory subjects. The exact date of the examination will be announced subsequently.

SMALL-POX IN CALCUTTA.

It would seem that the epidemic of small-pox which has been raging at Calcutta shows some signs of abatement. According to the Indian mails the number of patients at the Campbell Hospital has fallen to 148, forty-five of whom are Europeans.

The annual dinner of the Volunteer Medical Staff of Liverpool and district was held at the Exchange Station Hotel on Wednesday evening, the 24th ult., Brigade-Surgeon-Lieutenant-Colonel Wills, V.D., being in the chair. Amongst those present were Colonel Stache, R.E., Captain Crofton, R.N., Brigade-Surgeon-Colonel Nicholson, A.M.D., Fleet-Surgeon White, C.B., Lieutenant-Colonel Hart, R.E., Major Thompson, R.E., and the President, Medical Institution.

The *Times of India* states: "Until further orders the Government of India have ruled that no Military Medical Officer will be allowed to proceed on leave unless on medical certificate. This ruling will take effect after May 15th."

Nine invalids left Ceylon in the *Jumna* for Netley on April 1st, and twenty-five invalids were notified as leaving South Africa for Netley on April 6th.

H.M. troopship *Malabar*, which left Bombay on April 4th, is expected to arrive at Portsmouth on May 3rd with eighty-three patients for Netley.

It has been decided by the Government of India to allow officers embarking direct from Rangoon for Europe Rs. 575 as passage money.

Correspondence.

"Audi alteram partem."

"MEDICAL EVIDENCE AT INQUESTS."

To the Editors of THE LANCET.

SIRS,—My attention has been called to an article in THE LANCET of Feb. 2nd referring to an inquest held by me on one James Powell, who shot himself through the head on Jan. 11th. The article is erroneous and I think you should not have inserted it in a valuable and important paper like yours without ascertaining whether it was true. It proves the folly of accepting as correct the statements of interested informants. In this case the medical man who had attended the deceased for many years was called in and arrived shortly after death, when he examined the wound, and his evidence as to its description and other matters was given at the inquest, and was satisfactory to the jury, myself, and the solicitor who represented the family. There was no need to cause unnecessary expense to the ratepayers by calling the other medical man at the inquest, who could only corroborate the description of the wound, whereas the one who gave evidence knew the deceased so well, and assisted the court in deciding as to the state of his mind, which was important in a case of this sort.

I am, Sirs, yours faithfully,

H. MILLIGAN,
Deputy Coroner.

Victoria-buildings, King-street, Wigan, Feb. 22nd, 1895.

*** We willingly insert the above and regret the delay which has occurred in its publication owing to Mr. Milligan's letter having been mislaid. We still think, however, that it would have been advisable to take the evidence of the medical man who first saw the wound.—ED. L.

ISOLATION AFTER DIPHTHERIA.

To the Editors of THE LANCET.

SIRS,—Would you allow me to express a word of warning as to the risk of accepting the absence of specific bacilli (even after expert bacteriological examination) as conclusive evidence that a suspicious case of throat affection is not diphtheria? A case of undoubted diphtheria was recently notified to me. There had been no previous case in the house or vicinity, and careful inquiry failed to obtain evidence of any probable source of infection, and the patient, having recently suffered from whooping-cough, had not been out of the house for a period far exceeding the outside period of the incubation of diphtheria, but had developed the first symptoms of that disease three days after coming in contact with her brother, who had just returned from London. His recent history was as follows. He is employed in a house of business in London, and whilst there developed a throat affection and was seen by a medical man on behalf of his employers. This gentleman considered the case suspicious and called in a second opinion, and the result of the consultation was that the patient was notified as suffering from diphtheria and forthwith removed in the ambulance to one of the metropolitan isolation hospitals, where he was injected with antitoxin. This was on March 28th, and on April 11th the patient was discharged and sent home by rail. As this was the day preceding Good Friday the train was crowded with holiday-seekers. I have communicated with the hospital authorities and learn that this step was taken after a bacteriological examination had given negative results as regards the specific bacilli of diphtheria. In conclusion, may I be allowed to state that, on the results of etiological investigation of a very large number of outbreaks of diphtheria extending over a number of years, I have arrived at a decided opinion that in none of our ordinary severe infectious diseases are we so likely to meet with cases of prolonged infection and in none is it so important to advise the longest period of isolation practicable and reasonable? I am, Sirs, yours truly,

W. N. THURSFIELD, M.D.,
Shropshire, April 29th, 1895. County Health Officer.

"PROVISION FOR YOUNG IMBECILES."

To the Editors of THE LANCET.

SIRS,—I should like to add my support to the opinions expressed on this subject by Dr. Shuttleworth and Miss Twining. During the time that I was at the Darenth Schools for Imbecile Children I repeatedly had to refuse admission to imbecile children in various parts of England because the parents did not live in London, residence in the metropolis being necessary to secure reception of their children. Since leaving the schools, and more especially since my connexion with a London hospital for nervous diseases, I have come into contact with a large number of cases whose parents or medical attendants wished them to be admitted into an institution in order that the children might be suitably educated and trained, but I have been obliged in too many cases to say that no accommodation could be found. There is no doubt that there are very many imbecile children scattered throughout the country for whom training schools should be provided, and my opinion on this point is strengthened on reading the return recently made by order of Sir Walter Foster as to the number of imbecile and epileptic children under sixteen years of age in each workhouse, separate infirmary, school, or other similar establishment belonging to the guardians of unions in England and Wales (excluding the metropolis). It is a lamentable fact that England—which is foremost in charitable and philanthropic enterprise—lags so far behind other countries in its provision for these unfortunate children. Our American cousins are usually wideawake and not disposed to throw away their money, and yet in America there are fifteen or sixteen institutions for providing education and training, while we in England are content with six. Plenty of money is spent year by year in building asylums for the insane or adding to the accommodation already existing, and yet hardly anything is done for the training of these children. To allow the educable cases to remain in unions, where no provision for teaching is made, is a bad and expensive policy. This fact requires to be brought home to the minds of guardians and others whose business it is to look after these children, and it should be demonstrated to them that it is quite as necessary and important to make provision for juvenile imbeciles as for the insane.

I am, Sirs, yours faithfully,

FLETCHER BEACH,
Formerly Medical Superintendent of the Darenth Schools for Imbecile Children.

Kingston-hill, S.W., April 29th, 1895.

"THE WOMEN'S FREE HOSPITAL, SOUTHAMPTON."

To the Editors of THE LANCET.

SIRS,—The letter in THE LANCET of to-day from the Medical Society requires a few words of reply, and for many reasons it is fitting they should come from me. It must first of all be noticed by everyone who has carefully read the letters of this society that the charges they have formulated against the hospital and its officers have undergone frequent changes, the most notable of which occurs in Paragraph 1, in which the words used up to the present, "*appalling* frequency," degenerate into "*unusual* frequency." This is most satisfactory, and I am glad the society has seen fit to alter its verbiage. I do not know even now that the words "unusual frequency" are entirely fitting when the facts are considered. When I began first to know Southampton intimately from residence in its neighbourhood I was asked to see a number of patients in consultation and to do a number of operations. I was not surprised to find a large proportion of cases of bad pyosalpinx, for Southampton is just the kind of place where I should have expected to find them. But I was surprised to find that no effort whatever had been made effectually to treat these cases as they must be treated, and I could not discover that any ever had been so treated at the Royal South Hants Infirmary. I urged the establishment of a special hospital first on Mr. J. F. Bullar, who had been one of my post-graduate pupils, and then upon Mr. Eliot. The former gentleman elected to follow another special line of practice by opening an ophthalmic hospital. Mr. Eliot followed my advice, and I took no small pains to do all I could to help him towards success, and I am glad to feel that I have succeeded. I operated on a large number of cases, some in Southampton, many more in Birmingham. If all these had been included in Mr. Eliot's list their number *in ratio* might have, indeed, seemed to be "appalling," but they were merely the accumulation of the neglect of years. I attended meetings of the Southampton Medical Society, I showed specimens of Fallopian bags of pus fresh from Southampton patients, I did my best to instruct my audience in the diagnosis and treatment of such cases—some if not the whole of the surgical staff of the infirmary were present—but up to the present day it would seem as if gonorrhœa and its products were unknown in Southampton so far as the infirmary is concerned, for not a case of damaged appendages is yet recorded as having been dealt with there. There may be, yet I know that in spite of all my warnings and preaching against what has most erroneously been termed "Tait's operation" there has been a removal of uterine appendages far too widely extended. Hardly a month of my life passes in which I have not at least once to interfere and prevent an operation being performed, and it is very likely that I have given my vote against proposals of the kind at Southampton. This has happened in a number of cases at Southampton, and this fact goes to prove not only that I exercised the repressive influence which all consultants similarly placed must occasionally be called upon to exercise, but that Mr. Eliot loyally abided by my advice. Some of these cases the members of the Southampton Society have hunted up, and they pervert, or wish to pervert, the legitimate inference to be drawn from them. That early experience will conclude for the necessity of operation and that maturer experience will decide against it is the fact of most striking importance in the whole history of such operations as strabismus, excision of joints, &c. If it were not so, what would be the good of extending experience? There may be yet, as there have been, errors of commission; but are those who deliberately and persistently sin by omission to have no word raised against them? I assert that the greatest possible care has been used in the practice of the Women's Hospital at Southampton to avoid errors of commission, and the fact that the Medical Society of Southampton decline to hear the details of all the cases performed there read before them and be themselves the judges shows that they know this to be true. However, such a paper will be read before the British Gynæcological Society, and then I challenge the members of the Southampton Medical Society to produce any evidence they may have to the contrary.

One word as to the resignation of "four non-resident members of the society" arising directly from this issue. From the lightsome way in which this resignation is spoken of your readers might be led to regard it as of no consequence. They are "non-resident" members in the sense that they do not dwell within the borough of Southampton, but they were the four most distinguished members of the society, four members of the staff of the neighbouring Government Medical School at Netley, quite closely enough resident to know all the facts—men of position and knowledge to be able to judge correctly, so completely free from local prejudice as to give an unbiased judgment and to satisfy themselves of the real basis of all the complaints.

I am, Sirs, yours truly,

Birmingham, April 27th, 1895. LAWSON TAIT.

To the Editors of THE LANCET.

SIRS,—The committee of the Women's Hospital are at one with the Medical Society in the determination, as expressed in their last letter, to avoid a newspaper correspondence, and this communication is the last they will make on the subject at issue.

They emphatically decline, as in the beginning, to recognise the claim of the Medical Society to interfere in the affairs of the hospital, holding as they do the opinion that its action has arisen only from a "mean and despicable jealousy," utterly apart from any true regard for the interests of the profession or for the welfare of the sick—a fact now thoroughly appreciated in Southampton. If complaints had reached them in any legitimate manner, such as from patients (or their friends) who had been treated in the hospital, or from subscribers to the charity, or from leading members of the profession, unbiased by local influences, they would have at once removed any defects brought to notice; but not a single complaint from any one of these sources has been made. The committee, therefore, resting their case on the integrity of their actions and on the weight

of evidence that has accumulated since this correspondence commenced as to the value of the work done at the hospital, may justly ignore the attempts to injure it so persistently and unworthily made by the Medical Society.

We are, Sirs, yours faithfully,
A. F. FORBES, M.A., Chairman.
H. C. PHILLIPS, Hon. Sec.

Southampton, April 30th, 1895.

To the Editors of THE LANCET.

SIRS,—The committee of the Women's Hospital regret that Dr. Playfair should have made any mistake as to the correspondence they referred to. The committee referred to the following correspondence which took place in November, 1894:—

[COPY.]

"SOUTHAMPTON MEDICAL SOCIETY.
"Hamilton House, Southampton.
"Nov. 21st, 1894.

"DEAR SIR,—I am instructed by the committee of the above society to forward you the enclosed copy of a letter from Dr. Playfair, consulting physician to the Women's Free Hospital, Southampton, which has been sent to Dr. Gwillim, joint hon. sec., Southampton Medical Society. Will you kindly lay it before your committee? I am instructed also to request the favour of an answer to the circular which was sent last week to your committee.

"The committee of the Southampton Medical Society think that they may reasonably expect an answer within a fortnight, and if none is received within that time they will feel justified, considering the gravity of the matter involved, in taking such further action in the matter as they may deem expedient.

"I remain, yours faithfully,
(Signed) "NORMAN ALDRIDGE,
"Joint hon. sec. Southampton Medical Society.

"H. C. PHILLIPS, Esq.,
"Hon. Sec. Southampton Free Hospital for Women."

[COPY.]

"31, George-street, Hanover-square, W.,
"Nov. 18th, 1894.

"DEAR SIR,—I have been asked by Dr. Bullar whether in my opinion the questions put to the committee of the Women's Free Hospital in Southampton, in your circular of Nov. 8th, are such as are reasonable, and should receive a full and explicit answer. To this I have no hesitation in replying fully in the affirmative. In my opinion when any question arises as regards the working and results of such an institution in its own interests the more fully details are given the better. Personally I know nothing of the Southampton Free Hospital for Women. When I was asked to become consulting physician I consented under the full belief that it was all that such a hospital should be.

"Now that this has been called in question I am distinctly of opinion that its committee should afford every facility for a full and ample investigation of its working and results.—I am, faithfully yours,
(Signed) "W. S. PLAYFAIR."

As Dr. Playfair corresponded with the Medical Society some weeks before he wrote to his committee the committee naturally treated his latter communication in the only manner which was open to me. The committee do not think they need repeat their views on this subject, but would like to point out that they never attached the word "discourteous" to Dr. Playfair's correspondence, but to the manner in which he has treated them.

We are, Sirs, yours faithfully,
A. F. FORBES, M.A., Chairman.
H. C. PHILLIPS, Hon. Sec.

Southampton, April 30th, 1895.

REGISTRATION OF MIDWIVES.

To the Editors of THE LANCET.

DEAR SIRS,—Kindly oblige the guardians by publishing the enclosed.—Your obedient servant,
JNO. H. RUTHERGLEN, Clerk.

[COPY.]

"ST. MARY ABBOT'S, KENSINGTON.
"Guardians' Offices, Marloes-road, Kensington, W.,
"April 30th, 1895.

"SIR,—The guardians of this parish, who for some years past have trained in the special lying-in wards attached to their infirmary a large number of trained nurses to pass the examination of the London Obstetrical Society, have heard with much regret of the resolution passed by the General Medical Council on Dec. 3rd last with respect to the issue of midwifery diplomas or certificates in general, and of the certificates of the Obstetrical Society of London in particular. The guardians are the more surprised at this action as they have always understood that the General Medical Council have regarded the absence of public provision for the education and supervision of midwives as being productive of a large amount of suffering and disease among the poorer classes, and that the Council had been recommended by a Select Committee of the House of Commons to frame rules for the conduct of examinations for the admission of women to act as trained and certificated midwives. It was to a great extent to meet these expressions of opinion that the guardians of this parish undertook, in conjunction with the Workhouse Infirmary Nursing Association, the yearly training of a number of previously qualified nurses in their midwifery wards, but they have every reason to fear that if the resolution of the Council stands, and the London Obstetrical Society therefore ceases to issue in its present form its diploma or certificate of competency, the good work which they have been doing for so many years will cease, as women will be unwilling to enter for a course of training for which they will be unable to obtain a certificate of efficiency, qualifying them to act as midwives. Having regard, therefore, to the value and importance which is attached to special training in midwifery, and to the examinations conducted by the London Obstetrical Society and other bodies, the guardians have directed me to ask that the General Medical Council will reconsider and withdraw their resolution of December last, so that the training and sending out of competent midwives may be continued unimpeded. "I am, Sir, your obedient servant,
"JNO. H. RUTHERGLEN, Clerk.

"The Registrar, General Medical Council,
"299, Oxford-street, W."

"DEGREES OF KNEE-JERK."

To the Editors of THE LANCET.

SIRS,—Will you kindly give me a few lines of your space to make a slight addition to an article under the above title in THE LANCET of March 30th, 1895? In the last sentence but one, on p. 802, I expressed a hope that someone would invent an instrument which should enable us to measure the degree of any given jerk. My attention has been drawn to an article by Dr. Ewen Maclean in the *Bristol Medico-Chirurgical Journal* for March, 1892, in which he describes and figures such an instrument; he calls it a "jactometer," and it was made for him by Messrs. Down Bros., of London. His instrument fulfils so completely the three requirements I mentioned in my article that I think I must have heard or read of his invention before I wrote the article. If so, I had quite forgotten all about it, and I know I had not read his paper when my article appeared. I have not yet had an opportunity of seeing it in working, but I hope that all who are interested in the knee-jerk will read his paper and if possible try his instrument. It appears to me to be very ingeniously constructed.

I am, Sirs, yours faithfully,
London, April 30th, 1895. LEONARD J. KIDD.

"A CASE OF EQUINIA (GLANDERS); RECOVERY."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of March 16th Mr. T. W. H. Garstang records, under the above heading, a supposed case of glanders in a veterinary surgeon. The patient was thought to have contracted the disease while treating a horse affected with "nasal catarrh of a suspicious type," but, strange to say, both man and horse ultimately recovered. It appears to me that this fact throws grave doubts on the accuracy of the diagnosis in both cases. It is admitted that recovery from glanders is exceedingly rare in man, and in the horse it is essentially a fatal disease. I am not aware that there is any recorded case of recovery from glanders. Owing to the difficulties of making an accurate diagnosis in certain cases in the horse, cases of "nasal gleet" have in times past been mistaken for the specific disease, and on their recovery it has been claimed that they were genuine cases of glanders, but I do not think any authentic case of glanders has ever been known to recover. It is not for me to question the accuracy of Mr. Garstang's diagnosis in his case, but I should like to make a few observations on the opinions expressed by his patient on the subject of glanders in the horse. I have no means of knowing who the veterinary surgeon is, or whether he is a member of the Royal College of Veterinary Surgeons, or only a registered practitioner without any qualification, but it seems evident, from the statement attributed to him in Mr. Garstang's article, that he has not kept himself acquainted with the latest knowledge on the important question of glanders. He is reported to have said "that glanders always commences with nasal gleet, from which the animal may recover; but that when the gleet runs on to glanders or farcy recovery is impossible." In this statement appears the confusion I have referred to above. Chronic nasal catarrh or nasal gleet cannot run on to glanders. It is a non-specific disease affecting the mucous membrane lining the nasal passages and sinuses. It is often very difficult to treat, and usually proved most obstinate, but recovery may and frequently does take place. There can be no connexion between the local affection known as nasal gleet and the fatal specific disease glanders. Glanders begins with a discharge from the nasal passages, followed by other symptoms specially characteristic of the disease—ulceration

of the Schneiderian membrane, enlargement of the lymphatic glands &c.—but it is a specific disease from its commencement and runs a regular course invariably ending in death. Unfortunately the nasal discharge in glanders may for a long time be unaccompanied by any other visible sign of the disease, and it is in these cases that we find the greatest difficulty in deciding whether we have to deal with a simple nasal catarrh or with the dangerous malady glanders.

A few years ago, the only means of deciding whether such a discharge was specific or not was by inoculating a donkey with the discharge and waiting the result. If the case was glanders, then the donkey became affected, and all doubts were ended. To-day we have another aid to diagnosis in mallein, which is used as an inoculation in a suspicious case, and which produces certain definite results whenever glanders exists. It is reliable, and by its use we can detect latent cases of glanders, even where no discharge or other symptom has been noted. Then the veterinary surgeon goes on to say "that a horse suffering from nasal gleet may infect healthy horses with glanders or farcy, and yet may not show any symptom beyond the gleet, and may eventually recover, while the horses infected by him will die of the disease." Here is another fallacy. If the horse with the nasal discharge has glanders of course he may communicate the disease to other horses in close contact with himself and they may die while he may *apparently* recover for a time; but the improvement is only temporary and sooner or later acute glanders will supervene, rapidly ending in death. If, on the other hand, the horse is merely suffering from chronic nasal catarrh he cannot infect other horses with glanders, and if the other horses do become affected with glanders we should have to look for another source of infection. If the horse which was thought to have communicated glanders to the veterinary surgeon was only suffering from nasal gleet, he probably would recover as stated, but he could not produce glanders in the man. If he *was* suffering from glanders and appeared to recover, then sooner or later the disease will become acute and will cause his death.

I cannot believe in a case of simple nasal gleet running on to glanders or farcy, nor in true glanders ending in complete recovery. It is much to be regretted that the case in the horse was not tested by an inoculation of mallein, which would have set all doubts at rest. I do not know whether the mallein test has ever been tried in the human subject, but it seems worthy of trial, and might have been useful in the case recorded by Mr. Garstang. It would be most interesting to hear something of the later history of the horse in question, whether his recovery has been permanent, or whether any relapse has occurred. If the horse has *completely* recovered, as stated, I should say positively that he has never suffered from glanders, and that if Mr. Garstang's diagnosis was correct he must look for another source of infection. If the horse is still alive it would be most interesting to learn whether an inoculation of mallein would produce any effect. It would decide positively whether he has glanders or not, for it is possible for a horse to suffer from chronic glanders for many months before the malady becomes acute, the disease being confined to the lungs and producing no visible sign of ill-health. At any rate it is impossible for a veterinary surgeon to accept the statement that the horse has had glanders, has conveyed the disease to a man, and has completely recovered. With many apologies for taking up so much space,—I am, Sirs, yours faithfully,

T. W. CAVE, M.R.C.V.S., F.R.M.S.

University College, Nottingham, April 22nd, 1895.

THE DISCOVERY OF ANÆSTHESIA.

To the Editors of THE LANCET.

SIRS,—It seems to me that Dr. Preston's letter in THE LANCET of April 20th, claiming the discovery of anæsthesia for Dr. Long, ought not to go unanswered. Some ten years ago I investigated this most interesting, but highly complicated and little known subject, and the conclusions at which I arrived were as follows. Priestley[1] discovered nitrous oxide gas in 1772. In 1800 Sir Humphrey Davy[2] discovered its anæsthetic properties and successfully inhaled it himself to relieve the pain of cutting a wisdom tooth. In his account of these experiments there occurred this memorable sentence: "As nitrous oxide in its extensive operation appears capable of destroying physical pain, it may probably be used with advantage during surgical operations in which no great effusion of blood takes place." Strange to relate, nothing came of these remarkable observations. Their real import was not understood until nearly half a century later. One winter's night in December, 1844, a number of the inhabitants of Hartford, U.S., assembled to hear a lecture on nitrous oxide and other gases from Dr. Colton, a well-known popular lecturer, who tried the effect of the first-named gas on several of the audience. Among those present was Dr. Horace Wells, a dentist of that city. He noticed that a person under its influence sustained a severe injury of his leg without feeling any pain. Wells was so impressed with this fact that the next day he got the lecturer to give him the gas, and while under its influence he had a molar tooth extracted without feeling the least pain. As he recovered from the effects of the gas his first words were: "A new era in tooth-pulling."[3] The modern practice of anæsthesia dates from this operation. He soon afterwards gave the gas to more than a dozen of his patients, and with complete success. There can be no doubt that Wells, as indicated by the title of his pamphlet, "The History of the Discovery of the Application of Nitrous Oxide Gas, Ether, and other Vapours in Surgical Operations," had thoroughly grasped the anæsthetic idea, which in its subsequent developments so completely revolutionised surgery. He alone, in my opinion, is entitled to be regarded as the discoverer of modern anæsthesia. After his tragic death in 1848 his discovery was again in danger of being lost. Colton's praiseworthy endeavours to reintroduce it were in vain until 1863, when he succeeded in getting a few practitioners to try it. Subsequently its use spread rapidly. Among those present at Wells' ill-fated trial of gas at the Boston Hospital was his former pupil, Dr. Morton, and Dr. Jackson, lecturer on chemistry. Desiring in 1846 to use the gas in dentistry Morton applied to Wells for instructions how to make it. Wells referred him to Jackson, as the latter was a scientific man and a chemist. Jackson advised Morton to use ether instead, as it possessed the same properties and was as safe and easier to get.[4] Acting on Jackson's suggestion, on Sept. 30th, 1846, Morton painlessly extracted a bicuspid tooth from a man named Eben Frost. Thus the anæsthetic properties of ether were first practically demonstrated. In the following October several important operations under its influence were performed at the Boston Hospital, Morton being the administrator. In a wonderfully short time ether was in use nearly all over the civilised world. Probably no great improvement in the practice of medicine, once started, ever became so rapidly established. This was no doubt in a measure due to the fact that prior to Morton's discovery the properties of ether were not altogether unknown. It had often been inhaled both in America and elsewhere as an excitant. In 1818 Faraday had pointed out that the effects of inhaling its vapour were similar to those produced by nitrous oxide gas, and it was subsequently customary in the college courses both in Europe and America to illustrate this fact by various experiments. The resemblance between the action of nitrous oxide and ether vapour was therefore well known. A French dentist, Parmly of Paris, had occasionally anæsthetised his patients with ether prior to 1840. Dr. Wilhite, of Anderson, U.S., accidentally anæsthetised a patient with ether in 1841. We next come to Dr. Long, an English physician practising in Jefferson, U.S., who in 1842 performed a surgical operation on a patient thus anæsthetised. As, however, none of these persons published any account of their experience, the far-reaching importance of which they failed to discover, it is impossible to accord to any of them the honour of the discovery, for in a matter of this sort publicity is the touchstone of invention. Such are the isolated antecedent facts subsequently brought to light after the practice of ether inhalation had been established by Morton, to whom, in my opinion, the chief credit is due, for the history of all great discoveries shows them to have cast similar shadows before.

I am, Sirs, yours truly,

Preston, April 25th, 1895. W. ROGER WILLIAMS.

[1] Experiments and Observations on Different Kinds of Air, vol. i., p. 215. London, 1774.

[2] Researches, Chemical and Philosophical, chiefly relating to Nitrous Oxide, pp. 464-65. 1800.

[3] Wells' Pamphlet: Discovery of Nitrous Oxide &c., p. 14.

[4] Official Documents &c., Jackson's Statement, p. 472, also Morton volume, p. 47.

"MEDICAL SOCIETIES AND HOMŒOPATHS."

To the Editors of THE LANCET.

SIRS,—I read your leading article on the above subject in THE LANCET for April 13th, but did not know that you expected or would admit a reply to your "arguments" until I saw in to-day's issue that you apparently expected such a reply. As I happen to be a member of the Pathological Society of London of more than forty years' standing, I suppose I may consider your article includes a reference to my membership in this society. I may say that I joined this society in order to keep myself *au courant* with the progress of pathological knowledge, and not with any view of enlightening its members on any peculiar pathological theories or doctrines held by the school of homœopathy, for I may add that our school has no peculiar pathological theories or doctrines, and that the pathology we profess is precisely that taught in the ordinary medical schools. Such being the case, I do not see how my peculiar therapeutic views should disqualify me from being a member of a pathological society which is of no therapeutical faith. I do not happen to be a member of any society of general medicine which has to do with therapeutics, the homœopath societies proper being quite sufficient for my wants. But as according to the confessions of your most eminent men the therapeutics of the non-homœopathists are in a most imperfect and unsatisfactory state, I do not think it would do the general profession any harm, but probably much good, if they had in their societies members who are conversant with the reformed therapeutics of homœopathy. As we observe with amusement the frequent recommendations in THE LANCET and other medical periodicals, as newly-discovered remedies, of medicines that have long been used in our school, and for precisely the same affections as they are employed in homœopathy, it might on the whole be better that you should obtain a knowledge of these medicines and their therapeutic uses at first hand, from those who have long employed them, than have them introduced into your practice in the indirect and roundabout manner they are at present. To object to us as "irregular practitioners" seems to me to be very absurd, as we are the only medical men who really practise according to a *regula* or rule, and eminent authorities in your school have declared that medicine as they practise it has no principles, and that their treatment is not guided by any rule. I can assure you that those whom you call "homœopaths" are not, as a rule, desirous of joining your therapeutic societies, as they know they would meet with but scant courtesy from the members; nor are we at all desirous of having consultations on medical treatment with adherents of the old school, as we think that our own therapeutic method is infinitely superior to yours, as we are always ready to prove by reasoning and by results.

I am, Sirs, your obedient servant,

R. E. DUDGEON, M.D.,

Member of the Pathological Society, and Consulting Physician to the London Homœopathic Hospital.

Montagu-square, April 27th, 1895.

To the Editors of THE LANCET.

SIRS,—On page 1094 of the current number of THE LANCET you say: "If this is the only answer homœopaths can give to our arguments, further remarks on the subject would seem not to be called for." The inference is that if homœopaths have anything further to say you are willing to place it before your readers. I will therefore avail myself of your courtesy and offer a few brief remarks on the subject of your leading article in THE LANCET of April 13th on "Medical Societies and Homœopaths." Allowing for the moment that homœopathy is a delusion, and agreeing fully with your own view that this delusion, however unfortunate it may be, refers only to "the limited department of drug treatment," it is not obvious to those who view the matter from a standpoint other than your own that there is left no common ground between the "homœopath and the general body of the profession." Consequently to refuse to meet "homœopaths" either in "consultation upon an individual case" or at a medical society "in a conference upon any question of scientific interest" appears irrational and illiberal. In these days superstitions die an easy death when once the light of science is allowed fully to shine in upon them. No scientific society has ever investigated the pretensions of homœopathy except such societies as were composed of medical men already ostracised for having investigated them. To permit its claims to be thoroughly sifted in the light of day would result, if they are fallacious, in their final repudiation in a far shorter time than by any other method. The ever-changing measures and methods of modern therapeutics suggest that some enduring guide to the administration of drugs is at least a *desideratum*. It is claimed by thousands of educated practitioners and teachers of medicine that homœopathy affords such a guide. That it is "partially true" is acknowledged by authorities so high as Lauder Brunton and Sidney Ringer. This being so, the leaders of the general body of the profession are incurring a serious responsibility in declining to investigate a method so promising. That "homœopathy in the strict sense" is extensively practised in this and other countries is a fact of which you appear to be ignorant. That it is in some instances a safe and useful guide to treatment is easy to prove from writings the soundness of which even you yourselves would not question. Just how far it may be trusted is a point which demands a patient and vigorous investigation at the hands of those competent, by education and open-mindedness, to decide. The resources of the learned societies are required for this noble and pressing purpose. A few years devoted to the subject by those possessed of brains and money would suffice to settle the question, to advance therapeutics from a changing art to a stable if juvenile science, and to remove the disgrace of medical schism.

I am, Sirs, yours truly,

London, April 29th, 1895. EDWIN A. NEATBY, M.D.

"HOSPITAL PATIENTS AND IMMORALITY."

To the Editors of THE LANCET.

SIRS,—In reference to the annotation "Hospital Patients and Immorality" in your last issue, with the tenour of which I most fully and heartily concur, permit me to point out that your annotator has been led into error as to the statements attributed to me through trusting to a Sunday contemporary which contained an altogether insufficient and totally unauthorised account of my remarks. The meeting at which I presided was addressed by the Rev. the Marquis of Normanby on the subject of "Temptation and Self-control," with especial reference to impurity. In my chairman's address, after alluding to the importance of the subject and illustrating the need of self-control in the ordinary affairs of physical and social life, one turned to the many forms of want of control which young men were especially prone to develop, prominent among them being impurity, intemperance, gambling, and other such vices, which left their marks not only on the moral but also on the physical nature of those who indulged in them, adding by way of emphasis the statement to which umbrage has been taken, but which referred *not only to the results of impurity* but also to the other excesses to which I had already alluded. To such a statement surely no one can take exception. Moreover, as to statistics, I was most definite in pointing out that none were to hand, and hence my estimate was to be taken with a certain amount of reserve, rather as an impression received from many years of hospital work than as an accurate statement of facts. Under these circumstances I think you will agree with me that the want of accuracy lies not with the most carefully guarded remarks made by myself, but in the incorrect interpretations which have been placed upon them by others and in the want of care evidenced by those who copied such a statement without verifying it.

I am, Sirs, yours obediently,

Welbeck-street, W., April 30th, 1895. ALBERT CARLESS.

"THE NECESSITY FOR A CENTRAL MEDICAL ORGANISATION."

To the Editors of THE LANCET.

SIRS,—When reading my paper on "The Necessity for a Central Medical Organisation" before the Hunterian Society on Wednesday last the time at my disposal did not allow of more than a very brief sketch of the organisation I proposed. It was, I think, generally agreed that an organisation is necessary and that there is no organisation at present which meets the necessities of the profession. As there was a slight misunderstanding about the scheme I suggested

will you allow me to give it a little more in detail? I suggested a coöperative association which embodied the following idea. It consisted, in the first place, of a union of medical societies, whose members supplied the funds—either as shares or as subscriptions guaranteed for a number of years, preferably the former, which are essential, in my opinion, to the success of any undertaking of this nature or with this object. The local organisation of the profession would be carried out by boards in each district, and from these boards delegates would be sent to form the board of directors of the association. This board would therefore be composed of medical men in direct touch with every part of the kingdom. Through it local as well as general unity of action might very well be arrived at. The medical societies of the United Kingdom represent, on the average of the three kingdoms, about 50 per cent. of the medical profession, and might therefore be utilised for the purpose suggested. Such a coöperative association, with money at its command, would be capable of successfully meeting the many lay as well as the so-called charitable competitors we have to contend with. It could cope with the prescribing druggist, with medical aid associations, with the abuses of hospitals and public dispensaries, and with provident dispensaries and their sweating system. I will refer to the method by which it might deal with lay medical aid societies, as this point was especially animadverted upon in the discussion which followed the paper. By the transference from the lay companies to the medical coöperative association of the business of the former, the medical officers now attached by bond or by necessity to them would be freed from lay restraint and from "sweating." This could, I have every reason to believe, be accomplished by the process of underselling them or by buying them out, or by both methods combined, and without much difficulty. I cannot see that this would bring the association into conflict with the tenets of medical etiquette. Obviously, it need not affect the medical officers. One important result of such action would be that insurance societies would be very chary of embarking capital in a business when they knew that they would be systematically undersold to an extent which would cause them to fail to earn a dividend. Such an association as I have suggested would have far more power over its members than any body supported by voluntary contributions. It could unite the existing protection, insurance medical societies &c., and could afford its members exceptional facilities, as in supplying them with drugs, instruments, &c. at manufacturing or greatly reduced rates, 35 per cent. being commonly added to the cost of production.

In conclusion, I shall be happy to hear from any medical men who agree with me as to the necessity for a central medical organisation, and if together we can produce a workable scheme and can start it the amount of time expended on such an object will be well repaid in feeling we have benefited our profession.

I am, Sirs, yours truly,

Fellows-road, N.W., April 27th, 1895. F. R. HUMPHREYS.

"THE THERAPEUTICS OF PAPAIN."

To the Editors of THE LANCET.

SIRS,—Dr. Younger's article in THE LANCET of April 27th is a most interesting contribution to the therapeutic value of papain. All the cases he relates refer to a functional disturbance of the digestion, and most of them are accompanied by a condition of anæmia. It seems probable that both atonic dyspepsia and gastric ulcer, to which it stands in close relationship, are always connected, either etiologically or consequentially, with an impoverished state of the blood; there is, therefore, in both disorders an urgent demand for such blood tonics as arsenic and iron. In most cases, moreover, pain is a more or less urgent symptom, and for its relief an anodyne is often essential. Dr. Younger recognises all this because in many of his cases he administered iron, though in comparatively small quantities, while in others he resorted to the use of morphia. The papain seems on each occasion to have been ordered in an acid menstruum, and the iron administered separately. If there is great irritability of the stomach any medicinal mixture, from its disagreeable taste, is apt to produce nausea if not actual sickness, while the mineral acids are not always indicated and are sometimes very badly tolerated. In my own experience these difficulties have been overcome by the administration of the required drugs in pill form; and while each case demands a combination suited to its particular needs it may be of general interest to state that the following formula, when combined with a suitable regimen, has again and again yielded most excellent results:—R Ferri sulph., papain (Finkler), āā gr. ij.; ext. cannab. ind., ext. nuc. vomic., āā gr. ¼; ext. rhei, gr. ½; ft. pil. Sometimes reduced iron suits better than the sulphate, at others arsenic meets the requirements of the case better than nux vomica, and occasionally morphia is more efficacious than cannabis indica; but I am convinced that, apart from these necessary differences in detail, the full value can only be got from papain when it is administered in association with such other medicinal agents as the crying symptoms of each case declare to be essential, and that in a large proportion of deranged stomachs it is best tolerated in the form of a pill. I have repeatedly found the drug disappointing when given alone, but cases such as those reported by Dr. Younger, or those mentioned by myself in your issue of Feb. 9th, strongly proclaim its signal effect when administered under suitable conditions.

I am, Sirs, yours faithfully,

Warwick, April 29th, 1895. GUTHRIE RANKIN.

"THE LONDON AND MANCHESTER INDUSTRIAL ASSURANCE COMPANY, LIMITED."

To the Editors of THE LANCET.

SIRS,—I was very much surprised at the letter of "One Interested" in THE LANCET of April 20th, as his experience of the London and Manchester Industrial Assurance Company has been so very different from that of others who have written to you concerning it; but I am confident he would have had a different tale to tell had he kept an accurate record of the medicines supplied to his patients during the year. As it is he only "estimates" the medicines supplied; consequently neither he nor anyone else can definitely say what number of bottles was actually dispensed, and his statements in favour of the above company are in consequence open to doubt. On the other hand, I can give an accurate account of visits and medicines supplied from Sept. 29th, 1894, to March 25th last. I can also give an account from Feb. 7th, 1894, when I became referee, to Sept. 29th, 1894; but during that time I did not take note of all "repeats," consequently the numbers are much under what they would have been had I kept an accurate record. However, I prefer to let them stand as they are rather than estimate the additional numbers. They are as follows:—

——	Bottles.	Visits.	Paid.
			£ s. d.
March 25th to June 24th, 1894	117*	51	3 17 0
June 24th to Sept. 29th, 1894	346*	59	9 13 7
Sept. 29th to Dec. 25th, 1894	250	59	9 14 6
Dec. 25th, 1894, to March 25th, 1895 ...	222	66	9 5 0
Totals for year	935*	235*	32 10 1

* These are below the correct numbers.

That, worked out, gives only 8⅓*d.* for each bottle of medicine and leaves *nothing* for visits. If that is not sweating a medical man I should like to know what is. Even a "sixpenny" dispensary would pay better. These figures would have been still less favourable had I not refused during the last two quarters to treat as club patients those able to pay an ordinary fee and chronic cases, of whom there were not a few on my lists for the previous quarters. Mr. Woodward says in a letter in your issue of March 30th that the medical officers "are as well remunerated by us as by their private practice amongst the same class of people." To what class of practice does he refer? I am not aware that there is any cheaper class of practice than that carried on in "sixpenny" dispensaries, yet I have shown that his company does not pay as much.

The facts I have just stated constitute, if I may so term it, the "primary sweating" that everyone who carries out his agreement with the company has to suffer. Now let me expose the "secondary sweating," which as yet none of your correspondents has mentioned, and which seems an integral part of the system. Shortly after I had agreed to act as referee the district superintendent called upon me and told me that in order to obtain a large list it would be necessary

for me to attend patients immediately on their joining the society, and he also tried to persuade me to make a low uniform charge for each accouchement. I told him that, as far as accouchements were concerned, I should do nothing of the kind. He then remarked to a collector who was with him to the effect that they could not place on my list many *enceinte* women who might join the society and wish to be attended by one of their medical officers. As regards immediate attendance, unfortunately for a short time I agreed to it, and the result was that a number of people joined the society for a few weeks in order to get medical attendance and then left it. For those patients, of course, I got no payment whatever, as their names did not appear on the quarterly list. This, Sirs, is what I term "secondary sweating," as it is produced not by fulfilling the terms of agreement with the company, but by its agents. I should like to ask Mr. Woodward if the company approves of such actions on the part of its subordinates; and, if so, what right has the company to ask a medical referee to do more than he has agreed in writing to do? If the superintendents and agents act on their own account, the sooner they are placed under proper control the better, as I know that those who do not agree to the "secondary sweating" have very little chance of ever getting a large list from the company, which, even under the most favourable circumstances, would scarcely pay expenses. I must express my regret that I ever, through ignorance, had any connexion with such a company.

I am, Sirs, yours faithfully,

St. Peter's-park, W., April 29th, 1895. C. W. J. DUNLOP.

"THE TITLE OF 'DOCTOR.'"

To the Editors of THE LANCET.

SIRS,—Mr. Cotton's argument is just the converse of mine. Every doctor of medicine *is* a physician, but every physician is *not* a doctor, is my contention. A doctorate is a university degree; the possession of a licence in medicine or surgery only makes a man a "Licentiate." The Licentiate of a College of Surgeons is undoubtedly a surgeon, and the Licentiate of a College of Physicians is undoubtedly a physician; but neither the one nor the other is a graduate in medicine or surgery, not a doctor of medicine or surgery, and not a "doctor" at all in the just and strict professional sense. Mr. Sewell remarks that I suggest "no likely remedy" for the present state of matters. The remedy is surely obvious enough; let men call themselves what they professionally are. The practice of medicine or surgery for gain is not illegal unless a title implying legal qualification is assumed—then punishment can be inflicted. On the other hand, no matter what legal qualification a man may possess he may call himself "Dr." with impunity. This I hold to be unsatisfactory, to be false representation, and misleading to the public.

I am, Sirs, yours faithfully,

Glasgow, April 27th, 1895. D. CAMPBELL BLACK.

"MEDICAL CERTIFICATES FOR THE LONDON BOARD SCHOOLS."

To the Editors of THE LANCET.

SIRS,—My attention has been called to an annotation in THE LANCET of April 20th under the above heading, upon which I shall be obliged if you will kindly allow me to make a few observations. In the first place I may be permitted to state that nothing can be more foreign to the intention of the Board than to put any slight upon the medical profession. With regard to the subject of your annotation it is desirable clearly to define the object of the Board in the proposed appointments, and to set forth the considerations which have influenced the Board in the matter. In February, 1893, the Board, upon the recommendation of the members of the Tower Hamlets division, decided to authorise the appointment of three medical gentlemen in that division to examine cases in which a medical certificate produced by a parent as a reason for the non-attendance at school of his child was considered to be doubtful or unsatisfactory. It had been found that parents who, for one reason or another, desired to keep their children from school frequently presented certificates which were unsatisfactory, either on account of the vagueness of the terms employed or of a doubt as to the seriousness of the malady from which the child was alleged to be suffering. In other cases it was found advisable, for the sake of the child and of the school, to have a definite medical opinion; but delay and embarrassment arose from the absence of means available for the purpose.

I have before me a report of the Tower Hamlets divisional members upon the result of the experiment up to June, 1894. In this report, covering a period of fifteen months, the divisional members state that they consider the results, on the whole, satisfactory, and that they find that the opportunity of obtaining an independent medical examination has had a very beneficial effect in preventing idle excuses of illness and in securing the attendance of children who otherwise would probably have remained out of school. Indeed, the result of the experiment in the Tower Hamlets division has been such that members for other divisions of the metropolis are desirous of adopting a similar plan. I may here remark that the appointments in the Tower Hamlets division were made with the concurrence of the magistrates having jurisdiction in that division, and that appointments which the Board have recently decided to make in the East Lambeth division will similarly be submitted to the magistrates having jurisdiction in that division. I would beg to be allowed to point out that the medical certificates which are submitted by parents with regard to the attendance of their children at school are not, as your remarks would seem to imply, given by medical practitioners as a matter of courtesy to the Board. On the contrary, they are procured by the parent for production as evidence of the child's inability to attend school. In conclusion I would venture to remark that, so far from the question of the school attendance of a child being, as you suggest, a "trivial matter," it is, in my opinion, and I think nowadays in the opinion of most people, a matter of vital importance, not only to the future welfare of the individual child, but also indirectly to the community generally. I am, Sirs, yours faithfully,

JAMES W. SHARP,
Chairman of the School Accommodation and Attendance Committee.

School Board for London, Victoria-embankment, W.C., April 30th, 1895.

COVENTRY PROVIDENT DISPENSARY.

To the Editors of THE LANCET.

SIRS,—We are glad to be able to inform you that at the annual meeting of the above institution held on Tuesday last the resolution passed in May, 1893—viz., "that the institution being now self-supporting the pecuniary position of an applicant shall be no bar to his admission"—was rescinded. The proposition that it be rescinded was made by the chairman of the committee, seconded by the vice-chairman, and carried by the meeting unanimously. This was the result of the strong representations which we, the staff of the institution, had made to the members at a meeting specially called on account of the position in which the resolution placed us. The result of this is that the institution reverts to the lines on which it has been conducted for over sixty years—viz., that it is an institution for the working classes, and that the names of all applicants for admission are submitted to the monthly meeting of the committee, who exercise their discretion in refusing or accepting them. We send you this information in order that you may be able to let your readers know that we are anxious that our institution should be conducted on principles which are recognised by authorities in our profession. We are, Sirs, yours faithfully,

D. MCVEAGH,
M. FENTON,
CHARLES DAVIDSON, M.D.,
W. J. PICKUP, M.D.,
T. A. HIRD, M.B.

April 29th, 1895.

"A PROLONGED CASE OF HICCOUGH."

To the Editors of THE LANCET.

SIRS,—In reading the report of "A Prolonged Case of Hiccough," by Mr. D. Ferguson, I was very much surprised to find no mention made of ol. terebinth. being tried, the more so as he had the advantage of consulting three or four

medical friends. It is mentioned in "Fagge's Practice of Medicine."[1] I used it a few years ago in a case which had lasted nearly two days, and it yielded at once to a twenty-drop dose. While on the subject of therapeutics, I would like to ask whether it is desirable to administer medicines to women during menstruation. I do not, of course, allude to acute cases, but to such remedies as tonics or alteratives when continued for some time. Should they be discontinued during menstruation, and if so, why?

I am, Sirs, your obedient servant,

J. WIDMER ROLPH.

Medical Officer, Pahang Corporation, Ltd.

Kuantan, Pahang, March 27th, 1895.

REVACCINATION.

To the Editors of THE LANCET.

SIRS,—Does the fee for revaccination depend upon a successful result? Small-pox has broken out in my locality, and owing to the local opposition to the Vaccination Act the neighbourhood is in a very unprotected state. The rush for revaccination is beginning, and, of course, many of the cases will prove to be already sufficiently protected, and no result will show. These, however, will require as much care, and it is not fair that I should try them free.

I am, Sirs, yours truly,

April 29th, 1895. RETRIBUTION.

"PUBLIC AND PRIVATE VACCINATION."

To the Editors of THE LANCET.

SIRS,—I can confirm the statement of "Public Vaccinator" that there is a vast amount of inefficient vaccination done by private practitioners. A few years ago I had a child of my own vaccinated in four places notwithstanding the protests of several female relatives, and have since then been supplied with numerous instances where vaccination has been done in two or three places only by practitioners of good reputation, while no instances were to be found of vaccination in four or five places by a private practitioner. This statement concerns a town not forty miles from London with a good sanitary record. For obvious reasons I do not wish to name it, but shall be pleased to give you the name privately if you wish. I enclose my card and beg to remain,

Yours faithfully,

April 26th, 1895. PHYSICIAN.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Manchester and Salford Sanitary Association.

THE annual meeting was held on April 24th, the chair being taken by the Lord Mayor. In moving the adoption of the report the Lord Mayor said that the association had done, and was doing, good work. The Bishop of Manchester, who seconded the resolution, said the question of sanitary improvement had become one of great urgency in consequence of the numerous changes which had taken place in the population during the last century. More and more the people were massing themselves in the great towns, and the degree to which this had occurred might be judged by the fact that Yorkshire and Lancashire with the counties north of them contained more people than the whole of England and Wales did at the beginning of the present century. Sanitary improvement was a national question, for if the people were dwarfed and stunted and the health deteriorated "they would be less able than heretofore to bear the burden of national labour and defence." But they need not be dwarfed and stunted unless they neglected sanitary precautions. He enforced the duty of each one as being his brother's keeper, and said that "if we refused to do our duty by our brother we should justly and most certainly suffer for it." Sir Henry Roscoe, M.P., moved a resolution approving of the work of the association and of its deserving more adequate support. Dr. Simpson moved that a Smoke Abatement League be formed, and that the nucleus of the league consist of the organisations at present existing in Manchester, Rochdale, Middleton, Oldham, and Bolton, and that the committee of the Manchester and Salford Noxious Vapours Abatement Association (a branch of the Sanitary Association) be requested to take immediate steps for the formation of a committee of management. This was seconded by Mr. Charles Roberts of London and carried unanimously.

[1] Second edition, vol. ii., p. 739.

Sanitation in Prehistoric Times.

A numerously attended conversazione was held at Owens College on the 23rd ult. in connexion with the sanitary conference to open the day following. During the evening Professor Boyd Dawkins gave an interesting and amusing address on the Indications of Sanitary Progress in Prehistoric Days. The very earliest man of the pliocene age was only distinguished from the wild animals about him by being clever enough to fashion implements and use fire, and it could not be said that he was sanitary or insanitary. His successor, palæolithic man, was the user of the polished stone axe, the introducer of the domestic animals, he had a fixed habitation, and he invariably chose dry areas for habitation. In the neolithic man we have the first evidences of his living in a community, but the refuse was left in his habitation and he was ignorant of water-supply. He always selected, however, those spots where there was natural drainage, and he was the first tiller of the ground. The most important developments of sanitary appliances are found at the close of the bronze and in the iron age. There was a most elaborate system of refuse heaps, particularly shown in certain camps that had been explored by General Pitt Rivers, and especially in one near Lewes. But there was no evidence of any artificial water-supply. "But neither in the neolithic, the bronze, nor the prehistoric iron age were there any interments allowed within the area of habitation." In the bronze age evidence that cremation was the rule was to be found in the limestone ranges of Derbyshire and the chalk downs of Wiltshire.

Conference on Sanitary Progress and Reform.

This took place in the town hall by the kind permission of the Lord Mayor, and the first meeting was held at the close of the annual meeting of the Sanitary Association on Wednesday last. It was opened by the delivery of an inaugural address[1] by Dr. Simpson, chairman of the association, in which he sketched the gradual improvement of the health of Manchester and the possibilities of still further progress. The subject of smoke abatement was next considered. Sir Henry Roscoe, who had taken the chair, said that while the smoke from manufacturing operations had been chiefly considered there was the larger question of that from household fires, which was a most difficult one. Mr. A. E. Fletcher, chief inspector of alkali works, gave an address on Air Pollution, in which he urged that the compulsory powers given under the Alkali Acts to inspectors in regard to vapours from chemical manufactories should be given in relation to coal smoke. He gave numerous instances to show that the emission of smoke from such chimneys was not necessary. In one case, where there were eleven boilers, there was only smoke for two and a half minutes in ten hours of continuous observation. Nor was the consumption of smoke effected at a loss. In one case the owner said he had effected a saving of 10 per cent., as cheaper coal could be used satisfactorily. The question of domestic smoke was far more difficult. We like open fire-places and the blaze of the smoky coal. In his own house he had a stove in the basement by means of which he introduced a stream of warmed air into the rooms, and was able in consequence almost to dispense with fires. Mr. Herbert Fletcher of Bolton presented the report of a Committee of the Noxious Vapours Abatement Association on the testing of smoke preventive appliances. It would have been issued earlier but for lack of funds, as the steam users in whose interests the work was undertaken had not given the support that was anticipated. The committee organised a series of observations of all the principal chimneys of two representative Lancashire towns—Bolton and Oldham—where great attention had been paid to the subject through public and private prosecutions, and where a greater variety of appliances were in use than in any other towns. The condition of 179 chimneys was noted once every minute. The whole-day observations had enabled the emission of smoke from two representative towns on a summer's day to be expressed for the first time numerically, and had thus afforded a correct basis of comparison by which to estimate the relative importance of the various degrees of smoke abatement claimed by the appliances

[1] Dr. Simpson's address is published in another part of our present issue.—ED. L.

or methods of firing. The general average of 179 chimneys was 102 minutes each in ten hours, varying from 423 in the worst to 4 in the best. The report, which is of an exhaustive character, has not yet been printed. The Chairman (Sir H. Roscoe) said it had now been proved that manufactories could be carried on without the emission of black smoke. "That was an important result to have arrived at." In the afternoon Mr. Herbert Philips spoke as to the objects of the Smoke Abatement League, the formation of which was decided on at the previous meeting. It was expected that besides those already named other towns would join shortly. The work of the league was simple. It was shown that the nuisance was unnecessary and the law must be put into force. He believed that people only required to be convinced that the nuisance was preventable and that they would support those who took action. Mr. Cohen of the Yorkshire College spoke of the work done in Leeds and urged the appointment of Government instead of local smoke inspectors—men of scientific attainments who would not condemn unless they had adequate cause for doing so and who would give advice when required. Other gentlemen continued the discussion, and Mr. Horsfall said that in Ancoats the enforcement of the law was a farce. His own house was practically smokeless, and he used an old method for which there was no patent—the grate of the late Dr. Neil Arnott. Dr. G. H. Bailey of Owens College read a paper on the Air of Schools, in which he described the results of examinations of the air of certain elementary Board schools in Manchester and Salford, for which facilities had been given by the School Boards. They were made in summer and he hoped to repeat them in the winter. Even though the windows were kept open the whole of the school-time the air in the largest and best rooms had a very distinct odour, while in the class-rooms it was very oppressive, giving rise to headache where it had to be endured for half an hour together. In some of the schools matters were much worse; three were named where the excess of CO_2 was, as a rule, 12 to 15 in 10,000, and the odour, in the class-rooms especially, simply unbearable. It was clear that, even under favourable conditions, the fresh air supply was too limited. Mr. E. Hewitt read a careful paper on the Warming and Ventilation of Schools. Out of six in Manchester and Salford he only found one in which there was any adequate attempt at a scheme of ventilation. He advocated a mechanical as distinguished from the "natural" system. Mr. W. Spinks of the Yorkshire College followed with a paper on the Drainage and General Sanitary Arrangements of Schools which was of a very practical character. Dr. Emrys Jones gave an admirable paper on the Lighting of Schools, and on the evils produced by imperfect light—myopia, asthenopia, and spinal curvature. The best aspects for windows were east and west, and the light should come from the left of the pupil. Extra-good light should be provided for the girls' sewing classes and a room lighted from a glass roof would be the best. He urged the use of the electric light in all schools. He said that not 5 per cent. of the schools in Manchester and Salford would stand a most moderate test of efficiency as regarded lighting. The Dean of Manchester, who is Chairman of the School Board, said he could not sufficiently express his thanks for Dr. Emrys Jones's paper, notwithstanding the severity of his lash, and would bear in mind what he had been told. On Thursday, the 26th ult., papers were read for Cardinal Vaughan and Lord Meath, both of whom were unavoidably absent. Lord Meath's paper was on Open Spaces for Recreation. In London there was an acre of open space for 768 inhabitants, but there was still a crying need for more breathing spaces. Though Manchester has done a good deal no one could pass through the streets of the city without seeing there was need for more being done if she were to have a low death-rate and a high average of physical health, strength, and happiness. He advocated large parks, but more especially small playgrounds divided into two portions—one for boys and the other for girls and small children. Cardinal Vaughan's paper dwelt on the need for winter recreation halls for the poorest localities capable of accommodating 500 or 1000 people, well heated and lighted, and where music and entertainments, with refreshments at cost price, should be provided on certain evenings in the week. In the discussion which followed the general opinion seemed to be that the cost of providing music &c. for places so small would be prohibitory. Mr. Charles Roberts gave an exceedingly interesting and comprehensive address on Recreation generally. It was illustrated with diagrams showing how till about the age of ten boys and girls advanced in growth *pari passu*, and then that for two or three years the girls shot ahead, but after that were passed by the boys, who then kept the lead. In strength, however, the boys always stood first, and their recreations and games should be duly proportionate. He placed running at the head of out-door exercises, and spoke favourably of fencing, military exercises, boxing, wrestling, billiards, and dumb-bells for in-door recreations. He thought there was a danger lest the children should forget how to play, and mentioned games, such as rounders, which had become almost forgotten. In the afternoon of the 25th ult. a large audience, chiefly of ladies, met to discuss the subject of Women's Work in Sanitary Reform. The first paper was read for Mrs. Hardie, president of the committee of the Manchester Ladies' Health Society, in which the great advance in sanitary matters was acknowledged. "It was doubtful, however, when they contemplated the densely populated districts of Manchester and Salford and compared them with the condition of things when fish could be caught in the Irwell near the Cathedral, and when Greenhey and Kersal Moor were really rural spots, whether improved knowledge and laws had made up for what we had lost." She then gave details of the work the society had carried on, and appealed to the ladies of the district for personal help. Mrs. Charles Hughes addressed the conference on the teaching of home nursing, as distinguished from nursing as practised in hospitals and by the trained nurse. The great difficulty was the ignorance of the people, "who had no idea of the most ordinary cleanliness, and whose notions of comfort consisted of the very barest remove from poverty and destitution." Mrs. Clay said the ignorance of the people in sanitary matters was simply appalling. She moved, and it was seconded and resolved, "That the necessity of cottage bath-houses fitted with warm baths in the densely populated parts of Manchester having been forced upon the attention of the Ladies' Health Society, this conference is of opinion that the corporation would confer a great benefit upon the people by providing such bath-houses"; and a deputation was appointed to wait upon the Baths Committee of the corporation, with a view to obtain the carrying out of the resolution. The proceedings of Friday consisted chiefly of an address from Sir B. W. Richardson on Sanitation: a Review of the Past, and an Ideal for the Future. Dr. Simpson presided. The address was too important to allow of any attempt to sketch even its outlines, but no doubt it will before long be published in an accessible form. Dr. A. W. Ward, Principal of Owens College, proposed a vote of thanks to Sir B. W. Richardson for his able and impressive address. He said they desired to thank him, not only for the admirable address he had delivered, but for the life's work which that address embodied. It was seconded by Mr. T. C. Abbott, a member of the corporation, who drew attention to the fact that Manchester might be credited with having been the birthplace of one of the founders of modern sanitary science, the late Sir E. Chadwick. The resolution was carried by acclamation. In a brief reply Sir B. W. Richardson pointed out that nothing he had advanced as to the ideal future was so remarkable as many things which had occurred in the past hundred years. With the customary votes of thanks the conference concluded.

May 1st.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

The Muirhead Trust.

THOSE trusting University reformers who believed that the operation of the Universities Act would rapidly be followed by the application of numerous colleges to the various Universities have recently had a series of disappointing experiences. The agreement between University College, Dundee, and the University of St. Andrews has been pronounced illegal by the House of Lords. Queen Margaret College, which at one time appeared to be on the eve of affiliation with the University of Glasgow, suddenly changed its policy, gave up all independent existence, and allowed itself to be absorbed by the University; and now negotiations between the same University and the proposed Muirhead College have come to a deadlock. It may be remembered that the late Dr. Muirhead of Cambuslang left a sum of money, amounting to £30,000 or thereabout, in the hands of trustees for the

purpose of founding an institution for the education of women in medicine and in the physical and biological sciences. In a codicil it was suggested that this "Muirhead" College should be built near to the Victoria Infirmary. As Queen Margaret College was already in existence for the purposes proposed in Dr. Muirhead's will, the trustees approached the University Court with a view to devise, if possible, some joint scheme by which opposition between the University and the Muirhead College should be avoided. After several conferences the trustees offered certain proposals in which they suggested that the first two years of medical education should be provided by the University at Queen Margaret College, whilst the remaining three years should be undertaken by the Muirhead College, to be erected in the vicinity of the Victoria Infirmary, where the necessary clinical instruction could be obtained. This scheme would prevent the institution of two colleges competing with one another in a comparatively limited field, and would secure to women students—free from the intrusion of the opposite sex—the necessary lectures and laboratory instruction in the immediate neighbourhood of a well-equipped hospital. The University Court, however, acting on the report of a committee concerned in the negotiations, has rejected the proposals of the Muirhead trustees and has refused to put forward any counter-propositions. Whatever view may be taken of the refusal of the court to submit a scheme of its own, it can scarcely be questioned that there are valid reasons for its action in rejecting the proposals of the trustees. Apart from the difficulty incident to a system of dual control, and of making in practice a cleavage between the first two and the last three years of the medical curriculum, the proposal made by the trustees involves the renunciation on the part of the University of its right and duty to give to certain of its students instruction during the last three years of the medical curriculum, and to this the University could not be expected to assent. On the other hand, the responsibility for the non-success of the negotiations must not be placed entirely on the shoulders of the Muirhead trustees. They, of course, are bound by the terms of the will, and these seem to compel them to establish an independent institution in the neighbourhood of the Victoria Infirmary, so that the basis for their action is limited. There are also other clauses which may possibly cause difficulty in any scheme for coördinate work between the College and any other institution. Thus Dr. Muirhead does not wish any clergyman to have anything to do with the management of the College, on the ground that "creeds are the firmest fetters to intellectual progress," and medical men, we understand, are also forbidden, for a reason equally complimentary and suggestive. In any case it is a matter for regret that influences which might in combination have placed Glasgow in an altogether exceptional position as a centre for the University training of women students in science and medicine are likely to drift into mutually disadvantageous opposition.

Glasgow University.

Dr. Thos. Barr and Dr. Walker Downie, the recently appointed Lecturers on Diseases of the Ear and Throat respectively, were on April 26th introduced to their classes by Professor Gairdner, the Dean of the Medical Faculty. Each lecturer delivered an introductory address. In consequence of indisposition Professor Simpson has been granted a prolonged leave of absence, and the duties of the chair of Forensic Medicine are being discharged by Dr. T. K. Dalziel, who is assisted by Dr. Gavin McCallum. Dr. A. Maitland Ramsay has been appointed by the University Court to lecture on Diseases of the Eye to the students at Queen Margaret College.

The John Reid Prize.

The trustees of this prize have awarded the sum of £10 to Dr. Alex. Maclennan, Glasgow Western Infirmary, in recognition of the merits of his thesis on "Some New Methods for the Purification of Artificial Salicylic Acid."

Glasgow District Lunacy Board.

The position of consulting physician to the new asylum at Gartloch has been accepted by Dr. Alex. Robertson, and that of superintendent by Dr. L. R. Oswald. The latter has for several years been senior assistant to Dr. Yellowlees at the Royal Asylum, Gartnavel.

Small pox in Glasgow.

Small-pox has been a recognised quantity in Glasgow since the beginning of the year, but has been kept within limited bounds by the energy of the sanitary authorities. Recently, however, the number of cases has shown a disagreeable tendency to increase, and there are now sixty-three cases in the hospital. Most of these come from the western district, and in one street is a tenement, usually occupied by thirteen families, now completely deserted, the inhabitants having been removed either to the hospital or to the reception house.

Police Appointments.

Dr. Jno. A. Boyd has been elected a casualty surgeon to the Glasgow western district. The salary is £50 per annum. The Health Committee of the Police Commission has recommended that the salary of Dr. A. K. Chalmers, the junior medical officer of health, be increased from £400 to £500 per annum.

April 30th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Queen's College, Belfast: the New Laboratories.

THE erection of a large new block of buildings to be devoted to physiology and pathology is just being commenced at Queen's College, Belfast. An excellent site has been selected for it adjoining the existing medical buildings and the lately erected chemical laboratories, with both of which it will ultimately communicate. The ground floor will be devoted to physiology, which will have a large practical class-room, lecture theatre, physiological chemistry room, and professor's private work-room &c., all supplied with fittings and apparatus of the most approved type. The first floor will be given up to pathology, which will be provided with practical class-room, lecture theatre, private laboratory, general work and research room, culture room, &c. The building is to be heated with hot water. It is being built by the Board of Works, according to plans prepared by Mr. Robert Cockrane, F.S.A., in which the ideas of Dr. W. H. Thompson and Dr. J. Lorrain Smith, who are respectively at the head of the departments of physiology and pathology in Belfast, have largely been embodied. The new buildings will undoubtedly prove a most valuable acquisition to the medical school and the entire college. It is expected that they will be ready for occupation next year.

The Belfast Hospital for Sick Children.

The out-patient work having increased very much of late, the staff have recommended the board of management to appoint two additional members—an assistant physician and an assistant surgeon.

Oil-lamp Accidents in Belfast.

Accidents of this nature have become very frequent in Belfast of late. On Monday, April 29th, one of the ambulance waggons brought to hospital a woman who just before midnight was in the act of extinguishing a paraffin oil-lamp when it exploded, the result being that her clothes became ignited, and in a few minutes she was enveloped in flames. Two policemen after a time succeeded in putting out the flames, but not before the poor woman had been very badly burned. On the same evening an inquest was held in the Belfast Royal Hospital in reference to the death of a woman from the effects of burns received at her residence on the previous Wednesday by the explosion of an oil-lamp. Her son had also died from the same cause. The jury in their finding added a rider requesting the coroner to communicate with the Members of Parliament for Belfast and the counties of Down and Antrim with the object of calling the attention of the Government to the many cases of accidents which occurred in the city of Belfast and elsewhere from oil-lamp explosions, and requesting the Government to carry out the recommendations of the Select Committee upon Petroleum which reported last session.

Epileptics in the Belfast Workhouse.

This vexed question has cropped up again. It seems that a man aged forty-four was admitted to the workhouse on April 22nd and died there on the 25th. There is no reception-room for patients at the workhouse, but they are examined in a hall which is a public place, and when examined they are classified and sent to various departments of the house. This man was seen by two of the resident staff in consultation and they came to the conclusion that he wa

an epileptic (from the history given them by his wife and from their personal observation), and that he was insane or of weak mind. Accordingly they sent him (as they stated, they had no other option) to the epileptic ward, where he died. An outside dispensary officer said he treated him before admission for epilepsy. He had never seen him in a fit, but his wife told him he had them. When he saw the man he was suffering from congestion of the brain. He did not observe any signs of insanity about him, but thought the best place he could be sent to was the workhouse. At the conclusion of the evidence the coroner dwelt very fully on the various aspects of the case; the jury found that the man came to his death from congestion of the lungs in the lunatic department of the Belfast workhouse. They requested the coroner to forward copies of the evidence to the Local Government Board and Belfast board of guardians, and to request them to hold an inquiry into the whole circumstances of the case. They further said that, in their opinion, such an inquiry is necessary. "They also strongly recommend that a proper room be provided for the reception of patients while being examined, as it is cruel to do so in the public part of the infirmary."

Typhus Fever in Belfast.

The outbreak of typhus fever has not yet been stamped out. Within the last fortnight about six cases have been reported to the medical superintendent officer of health, most of them coming still from the Falls district, where the disease was first noticed. A case admitted from another part of the city to the Fever Hospital has been traced to infection from the original *locale* of the outbreak in the Falls part of the city.

The Battle of the Clubs at Cork.

All sorts of subterfuges are had recourse to for the purpose of getting the ordinary practitioners into consultation with the new club officers, but so far without result. Last week a medical gentleman was requested to see a patient, but on questioning the messenger he ascertained that no less than three of the newcomers were actually in attendance, and he promptly declined to see the patient unless the services of the three were dispensed with. It may be well to explain that with a view of saving the poorer club patients from their own folly it has been arranged that when an ordinary practitioner is in attendance he is to be at liberty to call in the assistance of a consultant gratuitously if the patient should be unable to pay for a second opinion. This sounds very like returning good for evil. A club patient in receipt of about £500 a year died recently. His poorly-paid club officer had visited him for a considerable time, and as his condition became serious the club officer withdrew and two other medical men took charge of the case. I cannot help thinking that had I been in his place I should have preferred the services of a practitioner who could have continued in attendance and who would be in a position to give the consultant a full history of the progress of the disease. Another apple of discord is about to be thrown amongst us. The Victoria Friendly Legal Association, hailing from one of the large English centres, has announced its intention of endeavouring to form a provident dispensary in Cork. The proposal of the association is simplicity itself. Anyone, no matter what his income may be, is to be at liberty to become a member of the dispensary, and on paying one penny per week is to be entitled to the services of the medical officers of the dispensary. Even that small remuneration is not to be given to the medical men, but is to be distributed between them and the association. Should the general profession in Cork decline to avail themselves of this beneficent commercial project the imported medical men are to be requested to affiliate themselves with the association, and should they refuse the terms other medical men are to be introduced into the city. I have no doubt the reply of the general profession in Cork will be given in no uncertain tones. Can there be any stronger argument in favour of the combination existing in Cork? In all humility I suggest that the Cork men have given a lead which, in the interests of humanity, ought to be followed by other large cities, for it is clear to me that if the remuneration of the profession should continue to diminish to a vanishing point young men of talent and industry will not enter the profession, and the great bulk of those already in it will have neither the time nor the energy to advance medical science. So the "penny wise and pound foolish" policy must necessarily recoil on its authors—the general public. Surely the General Medical Council is not a wholly impotent body. Can it do nothing to maintain the dignity of the medical profession and to safeguard the highest interests of the State?

Cork Societies' Medical Officers' Indemnity Fund.

The following additional subscriptions have been received by the treasurer, Mr. D. D. Donovan:—Surgeon-Major Thornhill, Indian Medical Service, £1 1*s.*; "Nec Opprimere nec Opprimi," £1 1*s.*; Dr. Dundas Grant, London, £2 2*s.*; Dr. Justin F. Donovan, Spanish Town, Jamaica, £1 1*s.*

May 1st.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Abdominal Hysterectomy—a New Method.

M. RICHELOT[1] has devised an original and improved method of performing this operation. He claims for his procedure great advantages over the current methods, which are long and laborious, and the quicker methods sometimes employed, which are frequently attended with danger. The principal advantage of M. Richelot's manner of operating lies in the complete absence of ligatures and sutures, forci-pressure only being used. A scalpel, a dissecting forceps, a long and a short hæmostatic forceps, and finally two long Richelot's forceps provided with a long "bite"—this is the only armamentarium necessary. The patient is placed on her back and the operator takes his station between the separated limbs. The vagina is first thoroughly disinfected, for in the course of the operation the surgeon's hand passes alternately into that canal and the abdomen. The usual abdominal incision being made, the uterus is enucleated and laid on the abdomen, covering the lower angle of the operation wound. [When fibromata occupy the lower segment of the organ the usual fragmentation is at once practised; when, however, they are interstitial they are left untouched, and the operation is proceeded with as follows.] An anterior peritoneal flap is fashioned by means of an incision across the anterior surface of the uterus, extending from one broad ligament to the other. The broad ligaments are thus liberated and thrown downwards over the bladder. The left index finger is introduced into the vagina, and the anterior cul-de-sac is incised with a large pair of scissors, the discission of the vagina being pushed nearly as far as the sides of the os. Then, leaving the uterus *in situ*, the broad ligament on one side is seized by the hand quite close to the uterus, an opening in the posterior cul-de-sac is made with the point of the scissors, and through this orifice is passed, *per vaginam*, the posterior limb of Richelot's forceps, the anterior limb being thrust through the corresponding hole in the anterior cul-de-sac. The forceps is then thrust from the vagina from below upwards and, guided by the hand holding the broad ligament, is placed on that ligament. The same manœuvre is practised the other side by means of the second pair of Richelot's forceps. Both ligaments being seized by the forceps, they are liberated from their extreme attachments. The uterus now hangs only to the posterior cul-de-sac, which is in its turn divided with a few snips of the scissors. But as this section gives rise to hæmorrhage three hæmostatic forceps are here placed. A plug of iodoform gauze is inserted into the upper part of the vagina, none being placed in the abdomen. The abdominal incision is sutured and the operation is over. Of five hysterectomies thus practised by M. Richelot, four being for fibromata and one for cancer, the four first mentioned were successful. The duration of the operation varies from thirty to thirty-five minutes, and no complications need be feared during the healing process. M. Richelot gives to his method of operating the somewhat cumbrous name, "hysterectomie par pinces vaginales d'emblée sans ligature ni sutures."

A New Process of Water Purification.

I have from time to time communicated to your readers methods stated to be efficacious for rendering safe the drinking of spring water. If we may believe MM. Girard and Bordas the most efficient sterilising process has been discovered by them. The water is first treated with permanganate of calcium, and then filtered through peroxide of manganese. It appears that the calcium permanganate—a salt easily manufactured—is, in the presence of organic matter and micro-organisms, decomposed into oxygen,

[1] Société de Chirurgie, April 24th.

manganese oxide and lime, and the organic matter and the bacteria are thus destroyed. But in order to further increase this oxidising power, and at the same time destroy the excess of calcium permanganate added to the water, this latter is filtered through a layer of manganese peroxide. The filtered water is perfectly limpid and is entirely free from pathogenic and other micro-organisms and from organic matter. The simplicity of the process tells greatly in its favour.

"Anglisch Pharmacy as She is Exerced."

I had recently occasion to prescribe for a leading member of the English colony a purgative dose thus formulated (Pharmacopœia Britannica): Pil. hydrarg., 2 gr.; ext. coloc. co., 6 gr.; euonymin, 1 gr.; ext. hyoscyami, 1½ gr.; divide in pil. 3 (silvered). The three pills to be taken to-night at bedtime. Three hours after the pills had been taken violent griping and purgation set in, the colic continuing at intervals for several hours. I learned that the druggist who had prepared the pills was one of those enterprising French tradesmen who, on the strength of possessing a copy of "Squire's Companion," and of retaining the occasional services of an English assistant, dub themselves "English chemist." On asking to be shown the compound extract of colocynth employed I was handed a pot of powder labelled "Pulv. pro. *pil.* col. co.," and hailing from a French wholesale establishment. I had the same prescription made up at a respectable English druggist's, and swallowed the pills myself last night without any suspicion of griping during the night. The frequent occurrence of such grave mistakes induces me to repeat the warning I have so often given to my compatriots not to have English prescriptions prepared at an establishment where the principal is a foreigner. In the shop above mentioned there was no English assistant, nor could anyone in the establishment speak a word of our language. When the Englishman comes abroad let him forget for the nonce the stores tariff and avoid risking his life by having prescriptions prepared at an establishment where the principal and his assistant are of the same nationality as himself.

April 30th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The late Professor Ludwig.

PROFESSOR KARL LUDWIG, one of the greatest physiologists of Germany, died in Leipzig on April 25th. He was born in 1816 at Witzenhausen, and took the degree of Doctor in 1839 afterwards becoming *privat-docent* in 1842 at the University of Marburg. This town he left in 1849 for Zürich, where he stayed for six years as Extraordinary Professor. In 1856 he was appointed Ordinary Professor at the abolished Academy for Army Surgeons in Vienna. For the last thirty years he was Professor of Physiology in the University of Leipzig, which owes to him no small part of its renown. At a very early period of his academical career he opposed all the transcendental theories in physiology which were then in vogue, and his first published work entitled "The Mechanism of the Secretion of Urine," explained the formation of urine in the kidney on merely mechanical principles. He improved physiological methods by the introduction of apparatus for the graphic recording of results, the most notable being probably the kymograph. He was the author of important researches on the circulation of the blood, on the influence of respiration on the circulation, and on the action of the medulla oblongata on the circulation. He also made very valuable researches on the part played by the nervous system in glandular secretion. Not only physiology but also pathology and clinical medicine are greatly indebted to him. Among his pupils need only be mentioned the late Professor Cohnheim, formerly one of the leading pathologists of Germany. The Physiological Institute of Leipzig, of which Professor Ludwig was the director, was a centre of attraction not only for students but also for graduates, who came there from all parts of the world to study under his direction. Professor Ludwig's name will ever hold an honoured place in the history of medicine.

The Appointment of Privat-docents.

Publicity has been given to a rumour that the Government intends to change the regulations affecting the appointment of *privat-docents*. Hitherto a scientific man who desired to hold this position had to apply to the board of his faculty, giving an account of his past studies and presenting a new work for the approval of the board. If the faculty thought him competent to be a university teacher he was admitted, and the so-called "habilitation" was conferred on him at a formal sitting, with the Dean in the chair and all his friends present. The Government took no part in the matter, but was informed afterwards by the Dean that Dr. X—— had been "habilitated" as *privat-docent*. It is now reported that the Government desires to have a voice in the admission of *privat-docents*, and wishes the faculties to obtain its permission before the "habilitation." Political reasons have induced the Government to take this step. Many *privat-docents* belong to the Social-democratic party, and the Government considers this to be dangerous for the progress of science and the tranquillity of academic life. One of the *privat-docents* at the philosophical faculty of the University of Berlin is a well-known leader of the above-named party, and the Government has already once expressed its disapproval, but the faculty declined to take any measures for removing the lecturer from his appointment. It is incomprehensible that a Socialist should not be an accomplished teacher of physics, of Greek, or of surgery, but the Government seems to hold other views on this question. The rumour is contradicted by the official newspapers, but many persons believe it nevertheless.

An Antitoxin for Carcinoma.

In the last number of the *Deutsche Medicinische Wochenschrift* Professor Emmerich and Dr. Scholl of Munich publish the results of experiments on the treatment of carcinoma by a new antitoxin. Through the researches of Neisser, Fehleisen, and others it has become known that carcinoma is influenced for the better by erysipelas. Professor Emmerich now states that this influence depends on changes in the blood produced by the cocci of erysipelas, and he accordingly makes use of the blood serum of animals who have been previously affected with that disease. His mode of proceeding is to inoculate sheep with cultures of the cocci of erysipelas, and to abstract blood when they are in the stage of convalescence. The blood is then passed through Chamberland filters in order to remove the cocci, and finally put up in little tubes of ten cubic centimetres each. With this blood daily injections are to be made into the tumours—from 1 to 4 c.c. for small growths, and from 10 to 25 c.c. for larger ones. The patients treated in this way did not complain of any pain, the temperature did not rise above 38·5° C., and no other complications were observed. In nearly all the cases the general state of the patients became better and the tumours diminished. Professor Emmerich and Dr. Scholl say that they do not yet claim that their method is to take the place of operative procedures, but as very often an operator leaves small pieces of the tumour the injections would in those cases be capable of dispersing those pieces. They also say that they do not yet know whether their antitoxin is a general specific or whether it acts only against certain forms of cancer. Tubes with antitoxin can be procured from their laboratory, so that other medical men may try their method. As up to the present all specific cures for carcinoma have failed, the profession should be very guarded in forming an opinion as to the new remedy.

"Scholastic Reform in Germany."

The annotation under the above heading in the last issue of THE LANCET is, I am truly sorry to say, founded on a real French *canard*. It is a pity that no "differentiation between the youthful Teutons" is to be made either by their teachers or by the medical profession. As there are about 100 000 school children in Berlin, nearly a hundred physicians would have been occupied all the year round in conducting the mental examination. The emoluments of the medical profession being only moderate, no doubt the school managers would have found practitioners enough to undertake this rather tiresome work. In this way an improvement in the circumstances of many of our professional brethren would have resulted from the alleged reform described by the French authority.

April 30th.

PRINCESS MARY ADELAIDE has consented to open the new Paddington-green Children's Hospital on Monday, July 1st, at 4 P.M.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Italian Medicine at Montevideo.

ITALY is largely represented in South America, and in no direction more successfully than in medical science. Thanks to her influence, material and moral, Uruguay takes rank among the most civilised and prosperous of the republics and Montevideo among the most enlightened of cities on that continent. In Montevideo, by a law recently carried through Parliament, an institute modelled on that of Pasteur in Paris has been erected for the treatment not only of rabies and anthrax, but of diphtheria and tetanus by sero-therapeutics. Besides these special objects, the institute offers to the student of medicine the amplest means for scientific and clinical research in every branch of the healing art, and is already being resorted to by undergraduates and post-graduates from neighbouring republics for the facilities it presents for the higher professional qualifications. As director of the institute, on the unanimous recommendations of the local faculty of medicine, Parliament has invoked the services of Dr. Giuseppe Sanarelli of Siena, in which seat of learning he has held with much acceptance the chair of Hygiene. After a thorough training in the Parisian institute, in which he greatly distinguished himself, Professor Sanarelli worked hard at the etiology and course of infective diseases, turning his attention more particularly to prophylaxis and precautionary legislation. In recognition of his services in this field the Montevidean Government has given him, besides the direction of the local Pasteur Institute, the honourable post of Professor of Hygiene in the University, and, to compass this appointment, has even strained the consuetudinary law which discountenances the election of foreigners to such chairs. The salary in connexion with it is 20,000 francs, considerably in excess of the standard of remuneration customary in Italian seats of learning.

The Health of Florence.

An official return just to hand gives opportune evidence of the satisfactory hygienic conditions of Florence. The "Bollettino Sanitario del Comune" states that in the first *trimestre* of 1894 the deaths were 1535, and in the corresponding period of 1895 they were 1451, making a diminution of 84. In this period in 1894 there died from measles 12, from typhoid fever 9, from diphtheria 26, and from pulmonary tuberculosis 158, making a total of 205 deaths. In 1895, on the other hand, there died from scarlet fever 5, from typhoid fever 7, from diphtheria 14, and from pulmonary tuberculosis 144, the total mortality amounting to 170. It will be seen in the diminution of the mortality in general over that period from the first *trimestre* of the preceding year that the infective maladies have shown a reduction of 35.

The "Cosmic Microbe."

The series of lectures in progress at the "Circolo dei Naturalisti" (Naturalists' Club) was continued on the 25th ult. by Professor Sanarelli. His theme was "Il Lavoro Utile dei Microbi nella Società" ("the Useful Work of Microbes in the Social Economy," or, to put it shortly, the "Cosmic Microbe"), and he dwelt, in a thoroughly Darwinian spirit, on the beneficent activity of microbes in the soil, the air, the water, in human alimentation, in human habits, in the propagation and evolution of the human species, and even in infective maladies themselves, in all which spheres they exercise a function which, as being natural, is at once beneficent and indispensable, the arrest of which would imply the rapid disappearance of animated creation from the terraqueous globe. Professor Sanarelli, from the researches begun at the Pasteur Institute, followed up at Siena, and soon to see the light in Montevideo, drew many striking illustrations of the part played by microbic life in biology and claimed, as one of the future achievements of science, the organisation and control of the inexhaustible, hitherto unutilised microbic forces, and the turning of these to practical account for the evolution of humanity in all its interests, individual and social. We are, according to Professor Sanarelli, on the threshold of discoveries which will revolutionise our dealings with the human organism in health and disease, widen our social horizon, and elevate and refine our common civilisation. The lecture, an attractive specimen of biological culture and speculation, was listened to with rapt attention by a numerous and distinguished audience, in which the Roman school, its teaching staff, and its practitioners, consultant and general, was largely represented.

The Cavaliere Rosati.

A great loss has befallen Italian surgery in the death of the Cavaliere Tebaldo Rosati, for many years a clinician and consultant of the highest authority in the Tuscan school. In Florence, at 10 o'clock this morning, he succumbed to what in Italian classification is given as "paralisi cardiaca" (paralysis of the heart), just a few minutes before his colleagues, Drs. Marcacci and Paoli, hastily summoned, arrived at his bedside. The Cavaliere Rosati was in his sixty-fourth year, and was "Chirurgo Primario" (Senior surgeon) of the two Florentine hospitals, the Santa Maria Nuova and the San Giovanni di Dio. He was a brilliant operator and sound teacher, and his presence at the various medico-chirurgical congresses, provincial, national, and international, was often made memorable by original communications of his own and by able and suggestive criticisms of those of others. Courteous, scholarly, and refined, very popular with his students, and always pleasant to meet in consultation, his departure is deeply regretted by the many who knew him as a professional brother or adviser as a citizen, or as a friend.

April 29th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

The Sweating System.

A LEGISLATIVE investigation into the effects of what is known as the "sweating system" is in progress. By the "sweating system" is understood the custom of occupying living-rooms in tenement houses for the manufacture of clothing, cigars, &c. Large numbers of operatives are crowded into living-rooms where they make clothing for the wholesale houses. The effects of this crowding upon the health of the persons employed have proved most disastrous; when cigars and cigarettes are manufactured the air of the whole house becomes very impure. The manufacture of clothing in these crowded living-apartments has resulted in the spreading of contagious diseases. Many instances have been narrated of the spread of scarlet fever, diphtheria, measles, and small-pox by means of the clothing made in rooms where children were suffering from these diseases. Inspectors have found the manufactured clothing used as the bed-covering of children suffering from contagious diseases. Outbreaks of small-pox and scarlet fever traceable to the clothing made in tenement houses are not infrequent. In some instances these occurrences are reported in other and remote States. The result of these investigations will no doubt be the enactment of stringent laws against the practice of opening workshops in tenement houses.

Permanent Establishment for the Cure and Prevention of Hydrophobia.

The Legislature of the State of New York has before it a Bill to make permanent provision for the treatment of poor persons duly certified by regular physicians to have been bitten by rabid animals or otherwise put in danger of infection with rabies. The measure provides for the transportation at the public expense of such persons with necessary attendants to the Pasteur Institute in the city of New York to enable it to provide for these patients during the time of their treatment.

Emigrant Inspection on the Russo-German Frontier.

The establishment of control stations for emigrant inspection on the frontier between Germany and Russia is to be participated in by the American line of both the New York—Southampton and Philadelphia—Liverpool services. These lines have now made arrangements to have all their passengers coming from Russia admitted to the stations at Illowo, Ottlotschin, Prostken, Eydtkuhnen, and Bajohnen in order that they may pass the same rigorous examination and at the same time have their baggage properly disinfected. The American line has agreed to participate in the maintenance of the establishments at a considerable annual expense, with a view of fully insuring itself against the importation of any infectious disease, inasmuch as only those passengers from

Russia will be allowed to pass through Germany to Southampton and Liverpool, on their way to the United States, who are provided with a passport entitling them to proceed on their journey through Germany, issued to them only after having gone through the requisite quarantine at those stations.

Discussion on Antitoxin.

At a recent meeting of the New York Academy of Medicine antitoxin was the subject of discussion. The bacteriologist of the Board of Health read a paper commending the use of antitoxin, and reporting favourably on the results obtained in the Contagious Disease Hospital of the Board. The physician of the hospital reported at length on the use of the remedy, and gave a summary of the recoveries from its use. A third paper was devoted to the methods of cultivating the antitoxin, and interesting instructions were given as to the selection of the horses best adapted to give an active and reliable agent. This paper was the more important as the Board is now authorised to place the remedy on the market. The last paper was read by the resident physician of the Infant Asylum, who gave an interesting account of the arrest of an epidemic of diphtheria in that institution by the general treatment of the patients with antitoxin. In the discussion which followed one of the visiting physicians of the Contagious Disease Hospital of the Board of Health stated that he had witnessed the use of antitoxin and carefully observed its effects. He asserted very positively that its value was greatly overrated. In the severe cases he saw no improvements that could not be properly and justly attributable to the other remedies employed, and the milder cases recovered in the usual manner. This declaration created a marked sensation in the large medical audience, and it was apparent that the question of the actual value of antitoxin was again relegated to the domain of uncertainty.

To Prevent Blindness.

Laws to prevent ophthalmia neonatorum are being adopted in many of the United States. The first impulse in that direction was given by Switzerland as early as 1865. It was enforced by Professor Horner, and as a result no child has entered the large blind asylum of Zürich who had become blind since 1865 from this cause. The necessity of such laws in this country is apparent when I state that it is estimated that there are upwards of 10,000 persons blind from the infection of the eyes at birth. At the Sloane Maternity in New York, where asepsis is rigidly enforced, no case of disease of the eyes of the new-born of any severity has occurred in 4000 births in the last six years. But outside of well-managed maternities the cases of ophthalmia neonatorum continue to occur with far too great frequency in spite of the laws made to prevent the disease. New York has had a law on this subject in force since 1890, but owing to the difficulty of enforcing it ophthalmic surgeons report that there is little diminution of the disease. The only hope of securing better results must be found in the rigid enforcement of laws regulating the practice of midwifery. This was done in Switzerland with the results above given.

Obituary.

SIDNEY ROBERTS WEBB, M.D. EDIN.,

OF THE CONGO BAPTIST MISSION.

WE regret to learn of the death, on his voyage home, of Dr. Sidney Roberts Webb, of the Baptist Congo Mission. A young medical man of great promise and geniality, who had profited by the advantages of a public school education and the subsequent medical course at Edinburgh University, his prospects at home were of the highest. But he was moved by the noble compassion which seeks to carry the best gifts of religion and of science to those who need them most, and accordingly took an appointment under the Baptist Mission, but without salary. He had just completed two years of successful work (in one day he saw 120 patients) and was returning for his first furlough, which by the rules of the society is taken at this early period to prevent the breakdown which is so apt to follow the first exhausting influence of the climate. So far as is known, he and his equally brave young wife left in excellent health, the brief telegram only announcing the fact of his death on the 12th ult. while on his way home. He had endeared himself to his colleagues and his patients on the field, who, with all who knew him, have the comfort of knowing that his sacrifices were attended with delight to his own heart, and of believing that goodness and power like his will find alike reward and scope in some other sphere.

CARL T. THIERSCH,

PROFESSOR OF SURGERY AT THE UNIVERSITY OF LEIPZIG.

IN the death of Professor Thiersch another of the prominent leaders of German surgery, whose reputations were won in the campaigns of thirty and forty years ago, has passed away. Professor Thiersch was born at Munich in 1822 and had just completed his seventy-fourth year when he died on the 28th ult. After studying at Berlin, Vienna, and Paris he obtained his doctorate at Munich, his graduation thesis being on the Action of Drugs. He engaged as surgeon in 1850 in the 2nd Schleswig-Holstein campaign, when he served under Stromeyer, whose teaching and example had much influence on him. From 1848 to 1854 he was prosector in the Munich Pathological Institute; in 1854 he was appointed Professor of Surgery at the University of Erlangen, and was transferred thence to Leipzig in 1867, where he occupied the chair of Surgery for twenty-eight years. In the war of 1870 he was consulting surgeon-general to the 12th Army Corps (Saxon). His writings have not been numerous. Perhaps the most important was the monograph on Epithelial Cancer published in 1865, which was marked by great originality and advanced considerably the histology of epithelioma. His work upon Skin Grafting is also well known. He contributed an article to the first volume of the Pitha-Billroth Handbook of Surgery upon the "Minute Anatomical Changes following Wounds of Soft Parts," another histological study which opened up new conceptions of the healing of wounds. He was an earnest follower of the Listerian methods and will be remembered as a sound surgeon and one who was as scientific as he was practical.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Karl Ludwig, the well known Leipzig Professor of Physiology.—Dr. Fano, formerly Professor *agrégé* in the Paris Medical School.—Dr. T. Druhen, Honorary Professor in the Besançon Medical School.—Dr. Adolf Weil, Teacher of Odontology in the University of Munich.—Dr. J. R. Taylor, formerly Lecturer in Surgery in the Bellevue Hospital Medical College, New York.—Dr. Rydel, Professor of Ophthalmology in the University of Cracow.

Medical News.

CAMBRIDGE UNIVERSITY.—The following is the amended notice of the plan for the examinations for medical and surgical degrees, Easter term, 1895:—

FIRST EXAMINATION.

Part I. (Chemistry and Physics).—Friday, June 7th, 9 A.M. to 12 M.: Heat, Electricity and Optics; 2 to 5 P.M.: Mechanics and Hydrostatics. Saturday, June 8th, 9 A.M.: Practical Chemistry, and Oral Examination in Chemistry and Physics (in the University Laboratory). Monday, June 10th, 9 A.M. to 12 M.: Chemistry; 2 to 5 P.M.: Oral Examination in Physics (for those who do not take Biology). Tuesday, June 11th, 9 A.M.: Oral Examination in Chemistry and Physics continued. Wednesday, June 12th, 9 A.M.: Oral Examination in Chemistry and Physics continued.

Part II. (Elementary Biology).—Monday, June 10th, 2 to 5 P.M.: Elementary Biology. Friday, June 14th, 9 A.M.: Oral and Practical Examination in Elementary Biology (in the Biological Laboratory).

SECOND EXAMINATION.

Part I. (Pharmaceutical Chemistry).—Thursday, June 13th, 1.30 to 5.30 P.M.: Practical Examination in Pharmaceutical Chemistry (in the Chemical Laboratory). Friday, June 14th, 1.30 P.M.: Oral Examination in Pharmaceutical Chemistry (in the Chemical Laboratory). Saturday, June 15th, 9 A.M.: Oral Examination in Pharmaceutical Chemistry, continued.

Part II. (Human Anatomy and Physiology).—Thursday, June 6th, 9 A.M. to 12 M.: Human Anatomy, 2 to 5 P.M.: Physiology. Saturday, June 8th, 9 A.M.: Practical and Oral Examination in Anatomy (in the Anatomical School). Monday, June 10th, 9 A.M.: Practical and Oral Examination in Physiology (in the Physiological Laboratory). Tuesday, June 11th, 9 A.M.: Practical and Oral Examination in Physiology (in the Physiological Laboratory). Friday, June 14th, 9 A.M.: Oral Examination in Anatomy (in the Anatomical School).

The names of candidates for these examinations must be sent to the registrary (through the prælectors of their respective

colleges) on or before **Monday, May 27th.** Forms on which it is requested that the names may be written will be sent to the prælectors. The certificates of candidates, accompanied by their postal addresses, must be sent to the registrary on or before Saturday, June 1st. The fees for each examination must be paid to the registrary when the certificates are sent in. The fee is £2 2s. for *each part* of the first and second examinations. Any candidate whose name and certificates have not been sent in and fee paid at the proper time is liable to pay an additional fee of £1 if he be nevertheless admitted to the examination.

The following gentlemen have passed the Third Examination for Medical and Surgical Degrees, Easter term.

Part I.—N. G. Bennett, B.A., John's; Biss, B.A., King's; Evans, B.A., Trinity; G. H. Field, B.A., Clare; Fletcher, B.A., Gonville and Caius; Hadow, M.A., Gonville and Caius; R. J. E. Hanson, Trinity; Hobday, B.A., Christ's; L. T. R. Hutchinson, B.A., Trinity; Key, B.A., Emmanuel; Lance, B.A., King's; Lawrence, B.A., King's; M'Carthy, B.A., Gonville and Caius; H. J. May, B.A., Gonville and Caius; Muir, B.A., King's; P. K. Nix, B.A., Pembroke; Ormerod, B.A., Trinity; Parker, B.A., Gonville and Caius; Pentreath, B.A., Queen's; E. Ransome, B.A., Clare; Ransome, B.A., Gonville and Caius; J. A. K. Renshaw, B.A., Trinity; A. Rotherham, Trinity; Sing, B.A., Christ's; Sladen, M.A., Gonville and Caius; K. S. Storrs, B.A., Emmanuel; Sturrock, B.A., Gonville and Caius; Sworder, B.A., King's; C. A. H. Thomson, B.A., Christ's; Verdon, B.A., Jesus; Watson, B.A., Trinity; Woodhouse, B.A., King's.

At a congregation last week the following degrees were conferred:—

M.D.—Robert B. Ferguson, Gonville and Caius.
M.B. and B.Ch.—John Nachbar, Clare; Howard Marshall, Gonville and Caius; Joshua J. Taylor, Emmanuel; Charles S. Bond, non-collegiate.

The next congregation at which degrees will be conferred will be held on Thursday, May 9th, at 2 P.M.

DURHAM UNIVERSITY.—**The following degrees were conferred at a Convocation held on April 27th:—**

M.D. (practitioners).—William Percy Ashe, Edward Ferrand, Stanford Harris, Benjamin Jones, Henry Arthur Latimer, William Moxon, John Taylor, Ebenezer Stanley Smith, and Thomas Frederic Young.
M.D. (examination).—George Henry Vane Appleby, Francis William Fullerton, Reginald Green, Walter William Hodgins, William Harvey Maidlow, Francis Herbert Marson, and Bernard Bezly Thorne-Thorne.
D.Hyg.—William Henry Turnbull.
M.S.—William Martin.
M.B.—Charles Allen Brough, James Atkin Heaton White, John Ralph Prior, Edward Turner, Sidney Herbert Hanley, Harold Dickinson Senior, Norman Bennett, Robert Montagu Le Haute Cooper, William I'Anson Charlton, Percival Davidson, Edward Fielden, Frank Chubb Ford, Ernest Rowland Fothergill, Ernest Edward Frazer, John Reginald Fuller, Richard Withers Gilmour, Gilbert Gocher, Charles Hanks, Ernest Robert Kendall, Wilfrid Robert Kingdon, George Edwyn Middlemist, Marcus Sinclair Paterson, William Harland Peake, Tom Sanderson, Ernest Percy Satchell, and Ernest William Scott.
B.S.—Norman Bennett, William I'Anson Charlton, Robert Montagu Le Haute Cooper, Percival Davidson, Edward Fielden, Ernest Rowland Fothergill, Ernest Edward Frazer, John Reginald Fuller, Richard Withers Gilmour, Gilbert Gocher, Charles Hanks, Marcus Sinclair Paterson, William Harland Peake, John Ralph Prior, Tom Sanderson, Ernest Percy Satchell, George William Scott, Edward Turner, and James Atkin Heaton White.
B.Hyg.—George John Awburn, George Henry Vane Appleby, Edward Turner, and Edward Cecil Willcox.
B.Sc.—Robert Beattie.
Dip. P.H.—William Henry Symons.

UNIVERSITY OF ABERDEEN.—**The following gentlemen have been admitted to the degrees of M.B. and C.M.:—**

B. A. Anderson, J. F. Christie, W. Cockburn, R. L. Collings, H. W. A. Cowan, J. Cran, J. M. P. Crombie, R. W. Cruikshank, T. D. Cumming, C. H. Dyer, A. Fenton, G. W. R. Fernando, J. Fletcher, H. R. Gardner, K. Gillies, W. G. Grant, H. M. W. Gray, D. V. Haig, P. Harper, L. J. Helmrich, G. Hunt, G. H. Johnston, V. V. Langenberg, W. Lethbridge, R. Lindsay, A. H. Lister, M. MacBean, J. R. Macmahon, W. R. Matthews, J. Moncur, A. Mowat, W. Murray, J. W. Myers, E. M. Payne, W. M. Philip, P. Prebble, A. Robb, A. Rose, J. E. Skinner, H. E. Smith, F. J. Troughton, W. S. O. Waring, J. S. Warrack, and A. Wood.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—**At the April sittings of the examiners the following candidates passed the respective examinations:—**

First Examination (Five Years' Course).—James Moffat Inverarity, Dundee; Alexander J. Wilson, Newmains; William Carey, Haywood; William McFarlane, Cambusnethan; Ewen Mackenzie, Ross-shire; William Denness, Bothwell; T. R. W. Atkins, Cork (with distinction); Owen Felix M'Carthy, Cork; Benjamin Bird, Woodford; James Roche, Cork; Henry Fowler, London; William Hutton, Belfast; Harry G. Ogilvie, Jamaica; John Dick, Greenock; and Jeanette Elizabeth Hackett, Westmeath.
First Examination (Four Years' Course).—Lloyd Thomas Lavan, Jersey; Hugh Owen Jones, Llangollen (with distinction); Charles Frederick Spinkes, Cheshire; Griffiths L. Jones, Carnarvonshire; John Coulter Warwick, Belfast; Robert Henry Munro, Coatbridge; Samuel H. Smith, Alderley; John J. Donagher, Limerick; Reginald C. M. Hoare, Birmingham; John J. Porter, Belfast; Alexander B. Hood, Glasgow; John Wm. Duncan, Newcastle; Robert Cooper, Newcastle; Bryan Jos. Nolan, Tralee; Michael Sheehy, Skibbereen; Andrew S. Omond, Edinburgh; and Andrew H. Jones, Newport (Mon.).
Second Examination (Four Years' Course).—William Haslam Brooks, Farnworth; John E. Harburn, Whitby; John Dunlop, Neilston; Christopher Wm. Davidson, London (with distinction); Edmund Joseph Cummins, Tipperary; William Scot, India; Joseph Sanderson, Yorkshire; Charles Delacherois, Antrim; John Roche, Cork; James Wilson M'Brearty, New Zealand; Richard Fox, Nottinghamshire.
Second Examination (Five Years' Course).—Richard N. Woodley, county Cork; William Mason, Belper; Basil Stanley Sanders, Bassalleg, Mon.; Arthur Frederic Seacome, Cheshire.
Final Examination (and admitted Licentiates).—Francis Thomas Rhodes, Glossop; Lilian May Blake, London; William Austin Mushé, Glasgow; Charles Albert Bois, Glasgow; Patrick Joseph Murphy, Carnbach, Aberdare; William Gordon, Salisbury; James Taylor Hancock, Grimsby; John Livingstone, Glasgow; David Lauder Lindsay, Derby; Alexander Smith, Leeds; Frank John Whitehead, Leicester; Alfred Bernard Steward, Manchester; Duncan Fletcher, Glasgow; John Atkinson, Crewe; Thomas Boulton, Bolton; James W. Astley Cooper, Norfolk; John A. E. A. Lavery, Coventry; Jeanie G. R. Duggan, Edinburgh; Arthur Thompson Hill, Llanrwst; Henry C. Lambart, M.A., Gwynfyd, North Wales; James Cook Neale, Moseley, Birmingham; Bernard H. Woodyatt, Over, Cheshire.

A CONVERSAZIONE **will be given by the Medical Society of London on Monday, May 20th, at the rooms of the Society, 11, Chandos-street, Cavendish-square. Mr. A. Pearce Gould will deliver the oration, taking for his subject "The Recent Evolution of Surgery." Subsequently there will be a reception by the President and music by the "Bijou" orchestra.**

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—**A meeting of this society was held on April 17th, Dr. J. S. Tew, President, being in the chair.—Dr. W. B. Ransom read a paper on Pernicious Anæmia. He based his remarks on a series of twelve cases, six of which ended fatally, and in which microscopical examination of the tissues was carried out. He found in some an increased deposit of iron in the livers and kidneys, but in others there was no increase of iron found in the livers. In some the primary change appeared to be in the blood-forming organs, so that it is an open question whether increased hæmolysis will account for the symptoms or explain the pathology in all cases.—Dr. Cattle detailed a case of pernicious anæmia which had ended fatally, and in this an increase of iron was found in the liver. Drs. Tew, Hunter, and Watson also spoke on the subject.—Mr. Belcher showed the body of a child which had lived for four days whose Abdominal Viscera were Misplaced, being extruded from the abdominal cavity through a small aperture at the umbilicus.**

SAMARITAN HOSPITAL FOR WOMEN, MONTREAL.—**A Canadian correspondent writes: "A new hospital for women, with the above name, was opened by Her Excellency the Countess of Aberdeen, wife of the Governor General of Canada, on Jan. 17th, 1895. It is non-sectarian, and is supported entirely by voluntary contributions, of which latter enough were handed in during the first month to carry on the work during a whole year. It is the only special hospital for diseases of women in Montreal, and will be moulded on the pattern of the New York State Women's Hospital in New York city. It is managed by a board of thirty of the principal ladies of the city, assisted by an advisory board of three laymen and three physicians. The staff consists of Sir James Grant, M.D., K.C.M.G., consulting physician; W. H. Hingston, M.D., LL.D., consulting surgeon: A. Lapthorn Smith, B.A., M.D., M.R.C.S. Eng., surgeon-in-chief; H. Lionel Reddy, C.M., M.D., surgeon; S. F. Wilson, C.M., M.D., assistant surgeon and registrar; Dr. Sylvester, assistant surgeon; and Dr. Letellier de St. Just, assistant surgeon. An anæsthetist and a pathologist will be appointed shortly. The out-door service is attended to by the assistant surgeons from 4 to 5 P.M. every day, at which hour the surgeon-in-chief makes his daily visit, and the most urgent cases are admitted. The hospital is absolutely free to women who are poor and sick, and who are residents of the city. Patients from outside the city will be admitted on payment of a nominal charge. The operation days are Thursdays and Fridays at 10.30 A.M., when physicians who have not been attending infectious diseases receive a hearty welcome. The hospital is situated in the choicest and healthiest part of the city, 1000 Dorchester-street, near Mackay-street."**

ST. JOHN AMBULANCE ASSOCIATION.—Lord Knutsford, G.C.M.G., has been appointed by His Royal Highness the Prince of Wales director and chairman of the St. John Ambulance Association in succession to Lord Sandhurst, G.C.B., G.C.S.I., the new governor of Bombay.

MEDICAL MAYORS.—Mr. Wm. F. Prichard Bassett, M.D. Edin., M.R.C.S. Eng., has been elected Mayor of Bathurst New South Wales.—Mr. John B. Meredith, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been re-elected Mayor of Raymond Terrace, New South Wales.

THE following members of the medical profession have been selected for admission to the Order of St. John of Jerusalem in England or for enrolment as Honorary Associates of the Order:—*Knight of Grace:* William Bezly Thorne, M.D. *Honorary Associates:* Professor William R. Smith, M.D.; Walter Edward Hacon, L.R.C.P. Lond. (New Zealand); James E Neild, M.D. (Melbourne); Charles Cotton, M.R.C.P. Edin.; Andrew Clark, F.R.C.S.; Arthur T. Norton, F.R.C.S.; and Charles Fox Goode, M.R.C.S.

RENEWED RISKS OF CHOLERA IMPORTATION INTO ENGLAND.—In several instances vessels have recently arrived in English ports having some cholera history. They have sailed from South American ports, where cholera is now prevalent, and one case at least has proved fatal during the voyage. But in no instance has the ship been deemed to be infected on arrival, and precautionary measures, such as cleansing and disinfection, have alone been necessary. A death from alleged cholera occurred last week at Carlisle, the attack occurring in a man recently arrived from the neighbourhood of the Tyne. The disease is stated to have been clinically cholera; but in the absence of a post-mortem examination such material as was forwarded to the Local Government Board for bacteriological investigation did not suffice to determine the actual nature of the attack.

NORTH-WEST LONDON CLINICAL SOCIETY.—A meeting of this society was held on April 17th, Mr. F. Durham being in the chair.—Mr. Jackson Clarke showed a case of Talipes Equino-varus on which he had operated with success. He detailed the steps of the operation. Mr. Battle advocated manipulation succeeded by fixation in plaster of Paris instead of operation when the children were seen early. Dr. Harry Campbell and Dr. Cagney discussed the possible causes of the deformity to be found in germinal defect.—Mr. Battle read the notes of three cases in which he had operated for Thrombosis of the Lateral Sinus secondary to Middle-ear Disease, and dwelt on the necessity of an early diagnosis. Mr. Jackson Clarke concurred.—Dr. Cagney showed a case of Nephritis with Dropsy, but without Albuminuria, in a child two years old, and described it as a rare condition. Dr. Leathem and Dr. Harry Campbell commented on the case.—Mr. Durham showed a case of Spina Bifida in the Lumbar Region, with Sphincter Paralysis from implication of the Sacral Nerves. Mr. Jackson Clarke and Mr. Battle commented on the case.—Dr. Harry Campbell showed a case of greatly Dilated Heart with Præcordial Bulging and Dyspnœa. He commented on the absence of ascites.

THE FRENCH HOSPITAL AND DISPENSARY.—On Saturday evening last the twenty-seventh annual dinner in aid of the funds of this institution took place at the Whitehall Rooms of the Hotel Metropole, the French Ambassador (Baron de Courcel) in the chair, supported by Sir Stuart Knill as representing the Lord Mayor, and the Italian Ambassador (General Ferrero) and other members of the *corps diplomatique*. After the usual toasts to the Queen and the President of the French Republic the Chairman proposed the customary toast to "The Founders and Benefactors of the Hospital," alluding in pathetic terms to the loss they had sustained in the person of M. Waddington, his predecessor, and coupling therewith the name of Dr. Vintras, who, with the late M. Rimmel, was largely instrumental in founding the hospital and in bringing it to its present state of efficiency. Later in the evening it was announced that subscriptions and donations had been promised to the amount of £2600, including a donation of £25 from the French Ambassador. During the evening vocal and instrumental music was dispensed under the direction of Cavaliere Tito Mattei who, as in years past, kindly gave his services on this occasion in association with Miss Rose Cavendish, Miss Rose Green, and Signor Maggi.

A LEGACY of £50 has been bequeathed to the Metropolitan Hospital Sunday Fund by the late Mr. Crosby Lockwood of Highbury New Park.

WE are pleased to hear that the Emperor of Japan has conferred the third-class decoration of the Order of the Rising Sun on Mr. W. Anderson, surgeon to St. Thomas's Hospital. It is well known that Mr. Anderson was for some years resident in Japan, where he collected material for his work on the pictorial arts of that country, which has done much to bring the Japanese favourably under the notice of European art circles.

PRESENTATIONS.—Mr. Frederic E. Peake, L.R.C.P. Lond., M.R.C.S., of Bristol, has been presented by the Emmanuel Ambulance Class with a silver-mounted ebony walking-stick, suitably engraved, in appreciation of his instructive lectures on first aid.—Dr. A. W. Hinsley Walker of Harrogate has been the recipient from the ambulance class in connexion with the Wesleyan Mutual Improvement Society of a handsome electro-plated tea service of fluted pattern and gold-lined, for his professional services as instructor on ambulance aid. This was the third presentation to him for his successful conduct of the class.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Forest-gate Schools.

IN anticipation of the Civil Service Estimates Sir John Gorst has given notice of his intention "to call attention to the removal of certain subordinate officers of the Forest-gate schools for having made statements as to the unwholesome food supplied to the children, and to the action of the Local Government Board in relation thereto, and to move a resolution."

Factories and Workshops Bill.

A large number of amendments to this Bill have been prepared in view of the proceedings before the Grand Committee on Trade. Mr. William Allen proposes that the places where work given out by factories and workshops is done should be licensed and subjected to inspection to see that they are not injurious or dangerous to the health of the people employed. Several members have amendments with reference to the temperature of factories and workshops. Sir John Gorst proposes that the age limit for the employment of children should be raised from eleven to twelve years; Mr. John Burns proposes thirteen years, and Mr. MacGregor, L.R.C.P. & S. Edin. &c., fourteen years. Several amendments have also been prepared with regard to the employment of women before and after childbirth. The amendment of Mr. John Burns is to the effect that the occupier of a factory or workshop shall not allow a woman to be employed within eight weeks of childbirth and within six months after she has given birth to a child. Mr. MacGregor suggests an amendment to this making the period prior to the birth of the child three months and the period subsequent also three months.

The Opium Commission Report.

Several members of the House of Commons have given notice of their purpose to call attention to the report of the Opium Commission.

HOUSE OF LORDS.

TUESDAY, APRIL 30TH.

Registration of Midwives.

Lord Balfour brought in a Bill for the Registration of Midwives. The Bill was read a first time.

HOUSE OF COMMONS.

THURSDAY, APRIL 25TH.

Surgeon-Major-General Giraud.

Mr. Campbell-Bannerman, replying to a question put by Sir Albert Rollit, said that the services of Surgeon-Major-General Giraud, Principal Medical Officer at Netley, had not been extended beyond the maximum age laid down by regulation for retirement. The age laid down by the Royal Warrant for retirement of a Surgeon-Major-General was sixty-two, when the interests of the public service would be materially advanced by his retention to that age, and it was deemed advisable to retain Surgeon-Major-General Giraud's services at Netley till he reached that age. He was verbally informed of this at the time it was so decided.

Provision for Old Age.

Mr. Shaw-Lefevre, President of the Local Government Board, answering a question put by Mr. Chamberlain, said that the reports of the Royal Commission on the Provision for Old Age showed very great difference of opinion among its members. It appeared, however, that a majority of them, in their separate reports or memoranda, were of opinion that further examination should be made of the various schemes for old age pensions, with the object of ascertaining whether the difficulties and objections which had been raised to them could be

removed. In view of this the Government would take measures for a further examination of the matter, but they were not at present able to come to any final decision on the subject.

County Government in Scotland.

Sir George Trevelyan, Secretary for Scotland, introduced to the House and explained in outline a Bill to make future provision for local government in the counties of Scotland. Among other public health clauses, he said, there was one which gave to the county council the power to make by-laws with regard to the sanitary arrangements of new buildings. The execution, he explained, would be committed to the district committee, who was the health authority on the spot and in practical exercise of health administration. In another part of his speech he said the medical officers had done good service by their reports to the county councils; but there was great difficulty in getting statistics with regard to births and deaths and the cause of death, such information being the very ABC of a real statistical system. The information had hitherto been got by a voluntary arrangement, but in the Bill it was proposed to give the medical authorities of the counties a legal title to obtain it. Later in his speech Sir George Trevelyan said that attention had been called to the difficulty of providing against the communication of disease by milk cans owing to their being washed with affected water. In the county he knew very well there were no less than 100 persons attacked with typhoid fever, and twenty died through the washing of the cans of a single dairy, which had a large *clientèle*, with affected water. The Government proposed to give the very strongest power to prohibit, under very severe and rapidly recovered penalties, the sale of milk from any dairy where infectious disease existed. They went further than the English Act of 1890. In that Act it was stated that the powers could only be put in force when infectious disease was caused by the consumption of milk. In this Bill they had added the words "or is likely to arise from the consumption of milk."

FRIDAY, APRIL 26TH.

The Local Government Board and Influenza.

Sir Walter Foster, in reply to Mr. Aird, said that the Local Government Board had instituted more than one inquiry as to the cause of influenza, and the results of these inquiries were contained in reports which had been presented to Parliament. In dealing with this matter the Board had availed themselves of aid outside their own medical staff. The subject continued to receive the attention of the Board, and at the present time they were employing outside aid in the study of the pathological and bacteriological relations of feverish cold (the so-called "influenza cold") with influenza proper. Information was from time to time received from other countries respecting influenza, and an opportunity was thus afforded for a comparison, in reference to this disease, of administrative measures of various kinds.

MONDAY, APRIL 29TH.

Small-pox Hospital for Bradford.

Mr. Shaw-Lefevre, replying to Mr. Byles, said that the Local Government Board had lately sanctioned a loan to enable the corporation of Bradford to purchase the Bierley Hall estate and some adjoining land as a site for a small-pox hospital. He was aware that the site was outside the borough and that the proposal of the corporation was opposed by persons in the neighbourhood and by the North Bierley Urban District Council. After the local inquiry which was held by one of the Board's medical inspectors as to the purchase of the Bierley Hall estate, the Board pointed out to the corporation certain objections to the erection of a small-pox hospital on this site. The corporation thereupon undertook to purchase additional land adjoining the estate and to change the position of the building. The objections of the Board were thus removed. The Board's medical officer had recommended that no small-pox hospital should be established within a quarter of a mile of a population of 150 or 200 persons. Evidence had been laid before the Board showing that this condition would not be infringed here, and the loan had been sanctioned on the understanding that there would be no such infringement. The reports of the Board's inspectors in cases of this kind were intended for the information of the Board only and were treated as confidential documents.

Poor-law Schools in West London.

Mr. Shaw-Lefevre, in answer to Mr. Fisher, said that the guardians of the Fulham Union had represented to the Local Government Board the inconvenience to which they were put owing to the insufficiency of the school accommodation in the West London school district; but the Board had not felt able to press the managers of the school district to provide further accommodation pending the report of the Departmental Committee which was now considering the subject of Poor-law schools. The Board had, however, instructed the inspector of the district to visit the Fulham Workhouse and ascertain the existing state of things as regards the children there, and afterwards to confer with the guardians with a view of steps being taken to meet the present difficulty.

TUESDAY, APRIL 30TH.

Disease in American Sheep.

Mr. Herbert Gardner replied at some length to a question on this subject put to him by Sir Herbert Maxwell. He said that after examination of the specimens sent to the Board of Agriculture, the veterinary officers of the Board had come to the conclusion that the disease was one of a parasitic nature well known to American pathologists, and fully described by them under the title of Nodular Disease of the Intestines. The subject, he went on to say, would continue to engage the attention of the Board, but it was not one which he thought need cause much anxiety to stockowners in this country. Large numbers of sheep had been imported from the United States, but so far as the veterinary officers were aware the particular parasite in question had never been detected in home animals, although the disease had been well known to exist in the South-eastern States for many years past.

Cholera and Filters.

Mr. Brookfield asked the Secretary of State for War whether an outbreak of cholera affecting several companies of the East Lancashire Regiment at Lucknow had been traced to the barrack-room filter; whether his attention had been called to the examination by Dr. Sims Woodhead and Dr. Cartwright Wood, at the Research Laboratory of the College of Physicians and Surgeons, of filters used in the Home Army, and to their conclusion that such filters were not only useless against disease, but probably materially increased the risk; whether he was aware that, as the consequence of applying to over 200,000 quarters a special system of filtration, the French War Office found that wherever the system was introduced typhoid fever disappeared, and that as its introduction extended the number of cases continuously decreased, showing according to the last report less than one-half of the average before the introduction of the system in 1888; whether he could say what special kind of filter was used in the system adopted by the French War Office; and whether he was aware that the number of cases of typhoid fever per thousand was 60 per cent. higher in the British Army in 1893 than in the French Army.

Mr. Woodall replied: Yes, sir; there was an outbreak of cholera at Lucknow last year. The Government of India appointed a special committee to inquire into the cause, and the report has not yet been issued. It appears, however, that it was due to a contaminated filter and filter bed in the barracks. The report by Dr. Woodhead and Dr. Wood, which the hon. member refers to, was one made last year to the British Medical Association on the relative efficiency of filters in general, and though very interesting and instructive it presents no new facts, but confirms the already existing opinion that the ordinary filters so largely used in the barracks in India are not effectual for the perfect purification of water unless it is previously boiled. Two hundred thousand of the "Chamberland-Pasteur" filter have been supplied to French barracks, hospitals, and laboratories, and it has been estimated that the deaths from enteric fever are 60 per cent. lower in 1892 than 1886–7 and the cases 80 per cent. fewer.

IN COMMITTEE.

Food Products Adulteration.

The Select Committee of the House of Commons on the subject of Food Products Adulteration, of which Sir Walter Foster is chairman, resumed its inquiry on Tuesday, April 30th.

The first witness examined was Mr. T. P. Ling, who appeared as a representative of the Trade Section of the London Chamber of Commerce. He had considerable experience in the retail trade in butter and margarine, and he was emphatically of opinion that margarine should not be packed in baskets or other packages with detachable labels. He would not stop the sale of margarine mixtures, because it would be unfair to the public, who were very fond of them; but he would insist on them being sold as mixtures. As to prosecutions, he thought that in every case the assistant who actually sold the article should be summoned as well as the principal. If that were done the assistants would refuse to sell fraudulent articles. As to imprisonment being imposed, all he as a large employer could say was that he would soon cease selling margarine if he were liable to imprisonment. His suggestion was that there should, in addition to the vestries, be a central authority, such as Scotland Yard, to which any member of the public might go and demand as a right that samples should be taken in a particular shop. He would require of a person who made this demand that he place a deposit of £5 in order to prevent frivolous proceedings. The present system of inspection lent itself to bribery, and in his opinion bribery prevailed to a considerable extent, although he was not prepared to offer proof of it.

Mr. J. R. Webb, a representative of the Provision Trade Section of the London Chamber of Commerce and the Cheese Sub-committee of the Home and Foreign Produce Exchange, said he had given special attention to the evils arising from the importation of adulterated cheese. A few years ago it was the boast of the trade that cheese was one of the few articles of food not adulterated, but that boast could no longer be made, because a large trade in what was called imitation or filled cheese had sprung up within the last few years. Large quantities of this imitation cheese came from America, from Hamburg, and from Holland. It was made from skimmed milk, and in order to disguise the poverty of the article there was an addition in some of it of lard and in some of oleo. The result was not a cheese, not even an inferior cheese, although it was sold as a genuine full-creamed cheese. If this article were kept a little time it went bad, and the mere process of rubbing it between the finger and thumb was sufficient to separate the foreign fats from the curd. Asked why, if the adulteration were so easily detected, the large trade in this article continued, witness said that the profits were so enormous that traders were prepared to run the risk. In Canada and many of the States of America laws had been passed prohibiting the manufacture of filled cheese. As to the remedy for this state of things, he recommended greater activity on the part of the Customs authorities and a law prohibiting both the importation and the manufacture of the article. He would give the Customs authorities power to stop consignments at the port of entry, and have analyses made, and he would also give powers to seize the article when found in warehouses. In his opinion this imitation cheese was an unwholesome article of food. If young it was very indigestible, and if kept till old it was rancid and offensive.

Mr. Cecil Rowson, representing the Liverpool Provision Trade Association, gave evidence as to the large quantity of filled cheese imported into Liverpool from America, and the prosecutions which have taken place in connexion with its sale. He said that only an expert could distinguish it from genuine cheese, although it had scarcely any of the nutritive properties of that article. He contended that both its manufacture and its importation should be prohibited by law.

The Committee then adjourned.

The Committee met again on the following day, with Sir Walter Foster in the chair.

Mr. William George Watson, a member of the firm trading under the style of the Maypole Dairy Company, examined by the Chairman, said that they had about sixty retail shops in Scotland, the north of England, the Midlands, and Ireland, and were perhaps the largest retailers of margarine in Great Britain. They had eight creameries in Ireland and one in England, and butter-buying offices in Denmark and Holland. When they engaged their assistants they got them to sign an undertaking to observe the requirements and provisions of the Margarine Act of 1887 and to indemnify the firm against damages, fines, &c., occasioned by any neglect or irregularity on their part in connexion with the sale or exposure for sale of margarine. On the back of the undertaking there were printed the provisions of the Margarine Act. In spite of these precautions the firm had been prosecuted. In purchasing margarine 90 per cent. of their customers asked for fivepenny, sixpenny, or sevenpenny, as the price might be

8 per cent. asked for butter, and only 2 per cent. actually asked for margarine. They all knew perfectly well that it was margarine they wanted and were getting, but they avoided naming it. He wished to see all margarine wrapped in paper with nothing else marked upon it save the word "Margarine," and to meet the objection on the part of customers to going about with it thus exposed he would allow an outer cover. Then he would have the assistant who sold the article prosecuted as well as the principal, and he would also like to see a central department to which complaints as to adulterations might be made. Otherwise he thought the present Margarine Act, properly enforced, was a sufficient protection to the public. He saw no objection to margarine being coloured to suit the taste of the consumer, or to it being kept in special receptacles. As to water in butter, his firm found during the excessive heat in 1893 that the butter from one of their creameries in Ireland contained 22 per cent. of water. They expressed surprise at this, and ordered another analysis, but with practically the same result. Thereupon they sank artesian wells and got refrigerators, and in this way reduced the percentage. In salting the butter they used dry salt and not brine. He accounted for the higher percentage in Irish butter compared with butter made in Denmark by the fact that in the latter country they had an ample supply of ice, which enabled them to get the water out of the butter.

By Mr. Colman: He was against imprisonment for offenders under the Margarine Act, because a principal might be sent to prison for an act of his assistant done in defiance of his instructions. The opinion he held about margarine was that pure margarine was far superior to poor butter.

By Mr. Frye: The false reports circulated about the constituent parts of margarine did great harm to the trade, and had led many people to believe that all manner of rubbish went to the making of the article.

By Mr. Kilbride: There were towns in Lancashire where the people insisted on having butter almost as white as lard. He denied that the object of colouring margarine was to make it resemble butter as much as possible. In Denmark the customer bought his margarine uncoloured, but he took home with him capsules for the purpose of colouring it according to his taste.

The Committee then adjourned for a week.

BOOKS ETC. RECEIVED.

BERGMANN, J. F., Wiesbaden.
Diätotherapie für Aerzte und Studirende. Von Dr. F. Schilling. 1895. pp. 166.

CASSELL & Co., London.
Medical Handbook of Life Assurance, for the Use of Medical and other Officers of Companies. By J. E. Pollock, M.D., F.R.C.P., and James Chisholm. Fourth Edition. 1895. pp. 214. Price 7s. 6d.

CHURCHILL, J. & A., New Burlington-street, London.
The Elements of Health, an Introduction to the Study of Hygiene. By L. C. Parkes, M.D., D.P.H. Lond. Illustrated. 1895. pp. 246. Price 3s. 6d.

DOIN, OCTAVE, Place de l'Odéon, Paris.
Affections Chirurgicales des Membres. Statistique et Observations, par Dr. Polaillon. 1895. pp. 310.

FISCHER, GUSTAV, Jena.
Die Specielle Chirurgie in 50 Vorlesungen. Von Professor Dr. Edmund Leser. 1895. pp. 1020.

GRIGGS, S. C., & COMPANY, Chicago.
Dr. Judas. A Portrait of the Opium Habit. By Wm. R. Cobbe. 1895. pp. 320.

HIRSCHWALD, AUGUST, Berlin.
Die Serumtherapie der Diphtherie. Von Dr. Adolf Baginsky. 1895. p. 330.

KEGAN PAUL, TRENCH, TRÜBNER, & Co., Charing Cross-road, London.
B. Bradshaw's Dictionary of Bathing Places and Climatic Health Resorts. With a Map. 1895. pp. 438. Price 3s. 6d.

LEWIS, H. K., Gower-street, London, W.C.
The Extra Pharmacopœia. By W. Martindale, F.C.S., and W. Wynn Westcott, M.B. Lond. Eighth edition. 1895. pp. 584. Price 9s.
The Surgical Diseases of Children, and their Treatment by Modern Methods. By D'Arcy Power, M.B. Oxon., F.R.C.S. Edin. Illustrated. 1895. pp. 548. Price 10s. 6d.
On the Relation of Diseases of the Spinal Cord to the Distribution and Lesions of the Spinal Bloodvessels. By R. Williamson, M.D. Lond., M.R.C.P. 1895. Price 2s.

LIVINGSTONE, E. & S., Edinburgh.
The Student's Handbook of Forensic Medicine and Public Health. By H. Aubrey Husband, M.B., C.M. Illustrated. Sixth edition. 1895. pp. 692. Price 10s. 6d. net.

LONGMANS, GREEN, & Co., London.
The Science and Art of Surgery. By Sir John E. Erichsen, Bart., F.R.S., LL.D. Edin. Tenth Edition. By the late Marcus Beck, M.S. and M.B. Lond., F.R.C.S., and by R. Johnson, M.B. and B.S. Lond., F.R.C.S. Illustrated. Vols. 1 and 2. 1895. Price 42s.

LÜNEBURG, H., München.
Hippokrates' sämmtliche Werke. Von Dr. R. Fuchs. Erster Band. 1895. pp. 526.

RIPAMONTI E COLOMBO, Roma.
Atti dell' XI. Congresso Medico Internazionale. Roma, 29 Marzo-5 Aprile, 1894. Vols. ii. and iii. 1894.

SAUNDERS, W. B., Walnut-street, Philadelphia.
Diet Lists and Sick-room Dietary. Compiled by J. B. Thomas, A.B., M.D. 1895.
A Manual of the Modern Theory and Technique of Surgical Asepsis. By Carl Beck, M.B. Illustrated. 1895. pp. 306.

SOCIÉTÉ D'ÉDITIONS SCIENTIFIQUES, Paris.
Traité des Tumeurs de la Vessie (Tumeurs intra-vésicales et para-vésicales). Par Dr. Clado. Préface par Professeur S. Duplay. Illustrated. 1895. pp. 756.

THACKER, W., & Co., Newgate-street, London.
The Management and Medical Treatment of Children in India. By E. A. Birch, M.D. Third edition. 1895. pp. 476. Price 10s. 6d.

THE AMERICAN ORTHOPÆDIC ASSOCIATION, Philadelphia.
Transactions of the American Orthopædic Association. Eighth Session, May, 1894. Vol. VII., 1895. pp. 398.

THE NEW SYDENHAM SOCIETY, London.
Lectures on Diseases of the Spinal Cord. By Dr. Pierre Marie. Illustrated. Translated by M. Lubbock, M.D., L.R.C.P. Lond. 1895. pp. 511.

THOM, ALEX., & Co., Dublin; and LONGMANS, GREEN, & Co., Paternoster-row, London.
Royal University of Ireland: the Calendar for the Year 1895. pp. 422.

UNWIN, T. FISHER, London.
The Female Offender. By Professor Cæsar Lombroso and William Ferrero. With an Introduction by W. Douglas Morrison. Illustrated. 1895. pp. 313. Price 6s.

The Pathology of Insanity: the Means and Methods of its Study; by W. J. Collins, M.D., J.P., L.C.C.; reprint (Adlard & Son, Bartholomew-close, London, E.C.).—Le Musée Social: Inauguration, 25 Mars, 1895 (C. Levy, Rue Auber, Paris).—The Journal of the Sanitary Institute; April, 1895 (E. Stanford, Cockspur-street, London, S.W.); price 2s. 6d.—The Journal of Pathology and Bacteriology; April, 1895 (Young J. Pentland, Edinburgh and London).—Illustrated Modern Art and Literature; Vol. I., No. 6 (Published at 68, Fleet-street, London, E.C.); price 1s.—The Royal Natural History: Vol. III., Part 18 (Frederick Warne & Co., Bedford-street, Strand, London); price 1s. net.—Enteric Fever in India and the French System of Conservancy; by W. H. Climo, M.D. (Pioneer Press, Allahabad, 1889).—Concepto y Tratamiento Modernos de las Diarreas Infantiles; Discurso del Dr. D. A. M. Vargas; 24 Febrero de 1894 (Casamajo y Compañia, Barcelona).—The Hygienic Conditions of Indian Cantonments and the Necessity for Sanitary Legislation; by Wm. H. Climo, M.D. (*Civil and Military Gazette* Office, Lahore, 1891).—The Government of the Workhouse, with an Appendix containing the Report of the Royal Commission on the Aged Poor; by the Editor of the *Poor-law Officers' Journal* (*Poor-law Officers' Journal*, Market-street, Manchester); 1895; price 1s.—A Priced Catalogue of Medical Aid and Pharmaceutical Specialities, issued by Wyley's, Limited, Coventry (Moor-street, Birmingham).—Alcoholic Drinks, or Notes on the Medical, Social, Political, and Religious Aspects of the Liquor Question; by P. M. L. Pinto, F.R.A., L.M.S. (*Times of Ceylon* Press, Colombo. 1895.)—On Ocular Affections in Syphilis of the Brain, with Report of Five Cases; by Chas. Zimmermann, M.D., Milwaukee, Wis.; reprint, 1895. (The Knickerbocker Press; G. P. Putnam's Sons, New York.)—The Countess of Dufferin's Fund: Tenth Annual Report of the National Association for Supplying Female Medical Aid to the Women of India for the year 1894. (Office of the Superintendent of Government Printing, India; Calcutta, 1895.)—Annales de l'Institut de Pathologie et de Bactériologie de Bucarest; troisième année, vol. iv., 1891 (Imprimeria Statului, Bucuresci, 1894.)—Magazines for May: The Pall Mall Magazine, London Home, Strand Magazine, Picture Magazine, Sunday at Home, Leisure Hour, Boy's Own Paper, Girls' Own Paper, English Illustrated Magazine, Friendly Greetings.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

BIRD, R. K., L.R.C.P., L.M., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a Public Vaccinator for Natimuk, Victoria, Australia, vice Weber, resigned.

BRYDEN, F. W. A., M.R.C.S., has been appointed Honorary Medical Officer to the Royal Surrey County Hospital, Guildford.

COOPER, C. E., M.B., B.C. Cantab., has been appointed House Physician to the City of London Hospital for Diseases of the Chest, Victoria-park.

DANIEL, W. P. TAYLOUR, L.R.C.P. Lond., M.R.C.S., D.P.H., has been appointed Medical Officer of Health for the Farnley Tyas Urban Sanitary District, vice Shaw, resigned.

EDWARDS, E. C., M.B., C.M. Edin., has been appointed Senior House Surgeon to the East Suffolk Hospital, Ipswich.

FYFFE, E. H., M.B., Ch.M. Glasg., has been appointed a Public Vaccinator for Fitzroy, Victoria, Australia.

GEMMELL, JOHN E., M.B., C.M. Edin., has been appointed Hon. Hospital Medical Officer to the Ladies' Charity and Lying in Hospital, Liverpool.

GRIMSDALE, T. B., M.B., M.R.C.S., has been appointed Hon. Hospital Medical Officer to the Ladies' Charity and Lying-in Hospital, Liverpool.

HAIG-BROWN, C. WM., M.B., M.S. Aberd., M.R.C.S., has been appointed Honorary Medical Officer to the Royal Surrey County Hospital, Guildford.

HARBISON, J. W., M.B., Ch.M. Melb., has been appointed a Public Vaccinator for Shepparton, Victoria, Australia, vice Hughston, resigned.

HINES, G. J., L.R.C.S., L.M. Irel., has been appointed Medical Officer for the No. 4 Sanitary District of the Hollingbourn Union.

HOGG, G. H., M.B., Ch.B. Edin., has been appointed Government Medical Officer and Vaccinator for the District of Cooma, New South Wales, vice Clifford, resigned.

JACOB, E. L., M.R.C.S., has been appointed Medical Officer of Health for the Leatherhead Urban Sanitary District.

JACOBSEN, G. O., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Pembridge Sanitary District of the Kington Union.

KIERNANDER, H. B., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer to the Narrandera Hospital, New South Wales.

MACGREGOR, J. J., M.D. Lond., F.R.C.S., M., L.R.C.P., has been appointed Assistant Surgeon to the Essex and Colchester General Hospital.

MACKENZIE, THOMAS, M.A., M.D. Edin., has been appointed Physician to Noble's Isle of Man General Hospital and Dispensary.

NEWMAN, F. JAS., M.B., Ch.B. Melb., has been appointed Health Officer for the Shire of Barrabool, Victoria, Australia.

NICHOLSON, B. H., M.B., M.S. Edin., has been appointed Assistant Surgeon to the Essex and Colchester Hospital.

O'DONNELL, J., M.B., B.Ch. Irel., has been appointed Medical Officer to the Dublin Metropolitan Police Medical Aid Association.

PAYNE, HENRY, M.D., M.R.C.S., L.S.A., has been appointed one of the Honorary Medical Officers to the Ashton-under-Lyne District Infirmary.

POLAND, J., F.R.C.S., M., L.R.C.P. Lond., has been appointed Surgeon to the City Orthopædic Hospital, vice Chance.

RENNIE, G. E., M.D. Lond., M.R.C.S., has been appointed Government Pathologist for the Metropolitan District of Sydney, New South Wales.

RICHARDS, J. B. O., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Milton Abbot Sanitary District of the Tavistock Union.

ROBINSON, T. H., M.D., Ch.M. Edin., has been appointed Surgeon-Captain to the Western Australian Defence Forces.

RUSSELL, F. R., M.D. Edin., M.S., has been appointed Honorary Medical Officer to the Royal Surrey County Hospital, Guildford.

SCOTT, J. M., M.B. Melb., has been appointed a Public Vaccinator for Steiglitz, Victoria, Australia, vice Sprod.

SHEWIN, ALFRED, M.D. Lond., M.R.C.S., has been appointed Honorary Consulting Physician to the Prince Alfred Hospital, New South Wales.

SHUTER, R. E., M.B., Ch.B. Melb., has been appointed, *pro tem.*, a Public Vaccinator for Bendigo, Victoria, Australia.

SMITH, J., L.R.C.P., L.R.C.S. Edin., has been appointed Health Officer, and Medical Officer to the Police and Gaols at West Devonport, Tasmania, vice Richardson, resigned.

STANTON, THOS., M.B. Dubl., L.R.C.S., L.M. Irel., has been appointed a Public Vaccinator for Koroit, Victoria, Australia, vice Jermyn, resigned.

THOMAS, J. LYNN, F.R.C.S., has been appointed Assistant Surgeon to the Cardiff Infirmary.

THORNE, J. M., L.R.C.P. Lond., M.R.C.S., has been appointed Consulting Surgeon to the Retford Cottage Hospital.

WILLOUGHBY, A. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Sunbury Sanitary District of the Staines Union.

YEATES, EDWARD, L.K.Q.C.P. Irel., L.M., L.R.C.S., has been appointed a Public Vaccinator for Learmouth, Victoria, Australia, vice Salter, resigned.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ADDENBROOKE'S HOSPITAL, Cambridge.—Resident House Physician. Salary £65 per annum, with board, lodging, and washing in the hospital.

ASYLUM FOR IDIOTS, Earlswood, Redhill, Surrey.—Assistant Medical Officer. Salary £150 a year, with board and residence. Applications to the Secretary, 36, King William-street, London-bridge, E.C.

BOROUGH OF STOCKTON-ON-TEES.—Medical Officer of Health and Medical Superintendent of the Fever Hospital. Salary £300 per annum. Applications to the Town Clerk.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL, Gray's-inn-road.—Clinical Assistants.

DARLINGTON HOSPITAL AND DISPENSARY.—House Surgeon, unmarried. Salary £100 per annum, with board and lodging.

EAST LONDON HOSPITAL FOR CHILDREN, Glamis-road, Shadwell, E.—House Surgeon. Board, lodging, &c., provided.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glamis-road, Shadwell, E.—Assistant Physician for Out-patients.

EAST SUFFOLK AND IPSWICH HOSPITAL, Ipswich.—Second House Surgeon, unmarried. Salary £70 per annum, with board, lodging, and washing.

GENERAL HOSPITAL, Nottingham.—Assistant House Surgeon, for six months. Board, lodging, and washing in the hospital provided. Also Assistant House Physician, for six months. Board, lodging, and washing in the hospital provided.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART AND PARALYSIS, 32, Soho-square, London, W.—Resident Medical Officer, for six months. Board, residence, and washing provided, and a honorarium of £10 10s. given.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—Physician to Out-patients. Applications to the Secretary, Offices, 27, Clement's-lane, E.C.

PARISH OF ST. MATTHEW, BETHNAL-GREEN.—Junior Assistant Medical Officer for the Workhouse, Waterloo-road, E., for six months. Honorarium of £20 will be given, with rations, furnished apartments, and washing. Applications to the Clerk, Guardians' Offices, Bishop's-road, E.

ROTHERHAM HOSPITAL AND DISPENSARY.—Resident House Surgeon for three years. Salary £100 per annum, with rooms, washing, and commons (exclusive of alcoholic drinks).

SCHOOL BOARD FOR LONDON.—Medical Officer for the Board's Truant School, Upton House, Homerton. Salary £100 per annum. Applications to the Clerk of the Managers, School Board Offices, Victoria Embankment, W.C.

SMEDLEY'S HYDROPATHIC ESTABLISHMENT, Matlock.—Junior Physician. Honorarium of £40 for first six months, and afterwards at the rate of £120 per annum, with board, lodging, &c.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL, Albert Embankment, London, S.E.—Lecturer on Physiology.

THE DENTAL HOSPITAL OF LONDON, Leicester-square, W.C.—Two Dental Surgeons.

THE ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, London, E.C.—House Physician, for six months. Salary at the rate of £70 per annum, with board and lodging.

WESTMINSTER GENERAL DISPENSARY, 9, Gerrard-street, Soho, London, W.—Honorary Surgeon.

WEST RIDING ASYLUM, Wadsley, near Sheffield.—Fifth Assistant Medical Officer. Salary £100 per annum, rising £10 a year up to £150, with board &c.

WORCESTER GENERAL INFIRMARY.—Assistant House Surgeon and Dispenser, for two years; unmarried. Salary £70 per annum, with board, residence, and washing.

Births, Marriages, and Deaths.

BIRTHS.

COLLETT.—On April 26th, at Ivy House, Marske-by-the-Sea, Yorkshire, the wife of H. G. Outram Collett, L.R.C.P. Lond., M.R.C.S. Eng., of a daughter.

ENSOR.—On April 17th, at Windsor-place, Cardiff, the wife of Mr. Henry Collen Ensor, surgeon, of a son.

JONES.—On April 28th, at Claybury, Woodford, Essex, the wife of Robert Jones, M.D., of a daughter.

MOORE.—On April 23rd, at Clarence House, Staines, the wife of S. J. Moore, M.D., of a daughter.

WATT.—On April 30th, at Millbrook, Plymouth, the wife of J. Leslie Watt, M.B., of a son.

MARRIAGES.

CARR—GRIFFITH.—On April 24th, at the Brixton-hill Wesleyan Church, by Rev. J. H. Rigg, D.D., and Rev. Richard Roberts, John Walter Carr, M.D., M.R.C.P., of 19, Cavendish-place, W., only son of the late John Carr, J.P., and of Mrs. John Carr, of 40, Bloomsbury-square, to Jessie, daughter of Walter Griffith, of Palace-road, Streatham-hill.

DUDFIELD—DODD—On April 25th, at Holy Trinity Church, Tulse-hill, Reginald S. O. Dudfield, M.A., M.B., Medical Officer of Health, Paddington, of Blomfield-road, Maida-vale, to Elsie, fourth daughter of Arthur Dodd, of Kimberley, Tulse-hill, S.W.

LORD—WILLIAMS.—On April 23rd, at St. James's, Manchester, by the Rev. W. J. Sims, M.A., Robert Ellis Lord, M.D., B.Sc. Lond., of Colwyn Bay, to Elizabeth Margaret, daughter of William Williams, Esq., of Brecon.

MITCHELL—BLACKWELL.—On April 23rd, at St. James's Church, Paddington, by the Rev. R. Mitchell, late vicar of Wield, and the Rev. W. J. Sowerby, vicar of Eltham, Ernest J. D. Mitchell, B.A., M.B., B.C., of the Grange, Eltham, to Kate Beatrice, widow of Edmund Alfred Blackwell, and daughter of the late C. F. Clements, of 3, Porchester-square, Hyde-park.

MUMFORD—READ.—On April 25th, at the Free Church, Kentish Town, Alfred Alexander Mumford, M.D., of Chorlton-cum-Hardy, to Edith Emily, second daughter of Charles Read, M.D., of Regent's-park, London.

ORD—PARTRIDGE.—On April 25th, at the Parish Church, Bromley, Kent, Reginald Whistler Ord, M.A., M.R.C.S., L.R.C.P., of Dover, to Mary Coralie, eldest daughter of Henry Partridge, J.P., of Barnfield, Bromley, Kent.

PRINCE—PETTINGER.—On April 23rd, at the Parish Church, Chorlton-cum-Hardy, John Woolnough George Prince, M.R.C.S., L.R.C.P., of Hartfield, Sussex, to Sarah Rose, younger daughter of the late Geo. W. Pettinger, M.R.C.S., Alexandra-park, Manchester.

ROWLAND—HADEN.—On April 24th, at St. George's, Ramsgate, Frank Mortimer Rowland, M.B. Cantab., of Lichfield, to Ellen Josephine second daughter of the late W. H. Haden, of Cardigan.

TELFORD-SMITH—STERRY.—On April 27th, at St. Stephen's Church, South Kensington, by the Rev. A. W. Gross, rector of Milton, Northampton (cousin of the bridegroom), Telford Telford-Smith, M.A., M.D., B.Ch., Medical Superintendent, Royal Albert Asylum, Lancaster, eldest son of Thomas Smith, Esq., Eglinton-road, Donnybrook, Dublin, to Ada, only daughter of W. Jex Sterry, of Norwood.

DEATHS.

DENNISTON.—On April 10th, on board R.M.S. *Tongariro*, James Denniston, M.D., of Bowdon, Cheshire, fifth son of the late Archibald Denniston, W.S., Greenock, N.B., in his 41st year.

GREENHILL.—On April 30th, from an accident whilst riding, Arthur Francis Greenhill, L.R.C.P., M.R.C.S., of The Lawn, Barnes, Surrey, aged 55.

HARRIS.—On April 26th, suddenly, at Denmark-hill, Camberwell, Henry Harris, M.R.C.S., aged 57.

INNES.—On April 24th, at Cairo, Edward Innes, M.B., C.M. Edin., youngest son of the late Sir James M. Innes, of Edingight and Balveny, Bart., aged 30.

JOHNSON.—On April 28th, suddenly, at Aigle, Vaud, John Johnson, M.D., late of Elmstead, Tunbridge Wells.

OSBURN.—On April 29th, at Santa Fé, New Mexico, Henry Walter Osburn, M.D., eldest son of Henry Osburn, Cedars-road, Clapham, late of St. Andrew's, New Brunswick.

TOMKIN.—On April 26th, at Witham, Essex, Thomas Marchant Tomkin, Surgeon, aged 76.

WILKINS.—On April 25th, at Ealing, Henry Wilkins, M.R.C.S. Eng., L.S.A., in his 84th year.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), National Hospital for Diseases of the Heart and Paralysis (3 P.M. and 8 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Gt. Northern Central (2.30 P.M.), National Hospital for Diseases of the Heart and Paralysis (3 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), National Hospital for Diseases of the Heart and Paralysis (3 P.M. and 8 P.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.), National Hospital for Diseases of the Heart and Paralysis (3 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), National Hospital for Diseases of the Heart and Paralysis (3 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-square, W.C.).—8 P.M. Mr. F. J. Bennett: The Subject of Dental Caries (with illustrative specimens). Exhibits by Mr. Storer Bennett. Casual Communication by Mr. Oswald Fergus.

WEDNESDAY.—LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-sq., W.).—5 P.M. Mr. H. T. Butlin: (1) Tumour of Neck, with Paralysis of Sympathetic Nerve; (2) Case showing Paralysis of Right Vocal Cord.—Dr. James Donelan: Case of Perforation of the Hard Palate occurring after Influenza in a previously healthy Boy aged twelve; also "sequestrum" from same case.—Mr. Charles A. Parker: Case of Tubercle of the Nose and Pharynx.—Dr. L. H. Pegler: Microscopic Sections illustrating the Histology of Anterior Hypertrophies of the Inferior Turbinated body.—Mr. W. R. H. Stewart: Case of Fistula in the Neck.—Mr. Charters Symonds: (1) Polypi from the Antrum, Unusually large Nasal Polypus, Post-nasal Sarcoma (specimens); (2) The case of Pachydermia previously shown.—Dr. Herbert Tilley: Case of Laryngeal Ulceration (? syphilitic or tubercular). Also by Mr. A. A. Bowlby and Dr. Dundas Grant.

THURSDAY.—BRITISH GYNÆCOLOGICAL SOCIETY.—Nomination of Fellows; Ballot. Dr. H. Michie: Pregnancy complicated by Suppuration within the Pelvis (with cases). Specimens by Mr. O'Callaghan, Mr. Bowreman Jessett, and Dr. John Shaw.

SOUTH WEST LONDON MEDICAL SOCIETY (Vestry Room, Town Hall, Wandsworth).—8.30 P.M. Dr. Hale White: On the Increase in the Frequency of Empyema as a Complication of Pneumonia during the Influenza Epidemic.

FRIDAY.—CLINICAL SOCIETY OF LONDON.—Mr. R. W. Parker: A case of an Infant in whom some of the Abdominal Muscles were absent.—Mr. Arbuthnot Lane: A case of Extensive Degenerating Nævus of the Bladder.—Mr. L. A. Dunn: Two cases of Gastric Ulcer treated by Laparotomy.—Mr. Silcock: Two cases of Perforating Gastric Ulcer—in one Excision of Edges, Suture, Death; in the other Formation of Reparative Adhesions, Laparotomy, Drainage, Recovery.—Dr. F. Lucas Benham: Thickened and Contracted Mesentery simulating Tumour in a case of Cirrhosis of the Liver.—Dr. Sidney Phillips: A case of Splenic Abscess; Secondary Suppuration in the Liver, and Death from Pyæmia.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 1 P.M., Mr. R. M. Gunn: Clinical Examination of the Eye.—London Throat Hospital, Gt. Portland-street, W., 8 P.M., Mr. W. R. H. Stewart: Examination of the Ear.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Percy Smith: Hysterical and Delirious Mania.

WEDNESDAY.—LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 2 P.M., Mr. A. Q. Silcock: Choroidal Affections, with illustrative cases.—Hospital for Skin Diseases, Blackfriars, 1 P.M., Dr. Payne: Psoriasis.

THURSDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., Mr. Edmund Owen: Cases from the Surgical Wards.—National Hospital for the Paralysed, Bloomsbury, 2 P.M., Dr. Beevor: Locomotor Ataxia.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. John Hopkins: Cases in the Wards.

FRIDAY.—LONDON POST-GRADUATE COURSE.—Bacteriological Laboratory, King's College, 3 to 4 P.M., Prof. Crookshank: The Microscope and Methods of Cultivation.

SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Hyslop: Acute Mania.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 2nd, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
April 26	29·40	S.W.	50	49	93	55	49	0·57	Raining
,, 27	29·54	W.	49	47	81	53	47	0·32	Raining
,, 28	29·99	N.E.	50	48	81	56	47	0·33	Cloudy
,, 29	30·17	S.W.	48	46	104	67	46	...	Hazy
,, 30	30·23	W.	53	50	104	64	46	...	Cloudy
May 1	30·15	S.W.	56	52	106	64	48	...	Fine
,, 2	30·59	N.	51	45	106	59	40	0·04	Fine

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

TO ADVERTISERS.

THE pressure on our advertisement space this week has necessitated the omission of some few of our clients' announcements.

AN UNORTHODOX REMEDY.

THE scientific mind is often exercised to account for the reason of certain ceremonial remedies of savage and primitive peoples which, while absurd by reason of the manner of their administration, have in them, nevertheless, a substratum of truth. Accident will account for the discovery of the remedy in a great many instances, and the desire for power would induce the "doctor" or medicine man to surround the remedy with an elaborate ritual in order that he might act on the credulity of human nature and minister to its love of mystery. In the *Sunday Magazine* the Rev. S. Baring Gould relates the following story, and, apart from its humour, it is interesting to speculate on the probable outcome of a similar incident in more superstitious times:—

"A poor woman came to the parson of a parish with the request, 'Please, pass'n, my ow'd sow be took cruel bad. I wish now you'd be so good as to come and say a prayer over her.' The parson protested that it would degrade his sacred office, but, the woman being very importunate and beginning to sob, to pacify her he went to the cottage to see the sow. Raising his right hand in a solemn manner, he said, 'If thou livest, O pig! then thou livest; if thou diest, O pig! then thou diest.' Singularly enough the pig recovered. Some time after, the parson falling ill with a quinsy that nearly choked him, the woman went to see him when he was almost *in extremis*, and, raising her hand, she pointed to him with her finger, saying, 'If thou livest, O pass'n, then thou livest; if thou diest, O pass'n! then thou diest.' An explosion of laughter burst the quinsy, and the 'pass'n' recovered."

The story is told in the writer's well-known happy style, but space compels us to condense it, and this necessarily somewhat spoils the humour.

F. W. E.—Yes.

MEDICAL MEN AS PROPRIETORS OF ADVERTISED FOODS IN LIMITED COMPANIES.

A RESPECTED CORRESPONDENT asks our opinion of the propriety of medical men accepting shares or debentures offered primarily to the profession by a leading member of a firm dealing in articles of food or in beverages more or less alcoholic and alleged to have special virtues for invalids. These virtues are advertised on a large scale. In the circular offering the debentures to the profession it is stated as a reason for such offer that the success of one of the principal articles is mainly due to the kind recommendations of the medical faculty. We can have no hesitation as to our reply. Medical men should have no pecuniary interest in foods which it may be their duty to have to prescribe. Not very long ago a number of medical men narrowly escaped the censure of the General Medical Council for accepting foundation shares in such a company on condition of advertising the wares of it. It is true that in the case now under consideration the purchasers of debentures are not required to furnish testimonials of the articles; but they would be in a position in which it would be to their interest to do so, and as members of the company they would be responsible for methods of advertising wares which they might not always approve.

ADVERTISEMENT OF MEDICAL NAMES AT SOUTHPORT.

MEDICAL PRACTITIONERS connected with hospitals and sanatoria at Southport and elsewhere would do a great service by refusing permission for their names to appear in the advertisement of such institutions. We see in the *Southport Visitor* a long list of such advertisements, including the names and qualifications of their medical officers. We recognise that these advertisements are drawn not by them, but by the enterprising secretary or lay officers. But the names are there nevertheless, and give an excuse to those who practise by direct advertisement for saying that those who stand high in the profession do not need to do so, seeing they have advertisement done for them.

MINERAL WATERS AS A BASIS OF MEDICAL ADVERTISING.

A LIST of names and addresses of medical practitioners supports an advertisement of mineral waters, and, we are informed, appears frequently in a Croydon newspaper. We are sure that the gentlemen in question will take steps to prevent the Association in fault from thus using their names to promote a commercial speculation in a manner contrary to the ethics and derogatory to the dignity of the profession.

"PULEX IRRITANS."

To the Editors of THE LANCET.

SIRS,—May I never find myself in a similar plight to Dr. Neale, for I am very susceptible to flea influence. Of late years I have avoided protracted acquaintance with these pests, for I have during the summer months carried a bottle of chloroform, and when bitten have poured a little of the $CHCl_3$ on my clothes immediately over the spot, which at once soaks through and permanently quiets P.I. and allays the irritation of its bite.

I am, Sirs, yours faithfully,

Canterbury, May 1st, 1895. W. PUGIN THORNTON.

LLANDRIDOD WELLS COTTAGE HOSPITAL.

Mr. J. Morgan Evans.—Rule 11 certainly needs to be made plainer. There is little use in giving medical men the right to "visit" their cases if they are not to be allowed to attend them or to prescribe for them. That this is the natural construction of the word is confirmed by the requirement of legal qualifications in the medical man to whom the privilege is accorded. It may be argued, indeed, that Rule 10 gives full power to the medical director; but this is not so clear. By this rule the medical director is to have entire control over the medical management of the hospital; but this must be construed with reference to Rule 11, which gives power to any medical practitioner to visit his patient—that is, of course, to visit him in a professional sense. Such should be the reading of the rule in an institution of this kind.

LOW FEES FOR EXAMINATION IN LIFE ASSURANCE.

A CORRESPONDENT informs us that he had declined the office of examiner for life assurance for the Order of Foresters on low terms, and was surprised at its acceptance by members of the profession whom he names. We think he was right. We admit that in the case of life assurance in friendly societies for really small sums medical officers should charge lower fees than for ordinary assurance work; but the fees here are too small—5*s.* for policy of £100; 7*s.* 6*d.* for £200; 10*s.* for £400; 12*s.* 6*d.* for £600.

A DOMESTIC CONVENIENCE.

THE Safety Letter Box Co., 14, Sherborne-lane, King William-street, E.C., send us an ingenious circular rim, in mahogany, to be placed on chamber utensils in the nursery. It is called "The 'Relief' Seat for Children."

DANS CETTE GALÈRE.

A CORRESPONDENT sends us a card which was found by the ladies of his household nestling in the price-list of a London tradesman. It is charitable to presume that it got there by accident; but the words in brackets are somewhat suggestive, and certainly unnecessary in the case of those to whom alone the change of address should be indicated—viz., the practitioner's own patients and his private friends. We append a copy of the card, omitting the name and the addresses.

CHANGE OF ADDRESS.

MR. ————,
(Medical Practitioner.)

HAS REMOVED TO

—— —— ROAD.

[FIRST HOUSE OUT OF —— ROAD.]

FROM —— —— ROAD.

A M.O.H.—The answer must mainly depend on the source of the instructions received by the medical officer of health to attend the inquiry. As a rule, attendance at such an inquiry at the request of the local sanitary authority for whom the officer acts does not carry a fee with it; but in the case of an officer only giving part-time services we see no reason why he should not claim a fee for such exceptional services. If the county council requested the officer's attendance, then he should claim a fee from them; for the local medical officer of health has no duties towards a county council, except as regards the transmission to them under the Local Government Act, 1888, of certain reports.

Mr. C. Stanley Kirton.—No.

VACCINATION IN GERMANY AND FRANCE.

To the Editors of THE LANCET.

SIRS,—I shall feel deeply grateful if any of your correspondents can furnish me with information about the vaccination laws in Germany and France. The points which I am most anxious to obtain some knowledge of are—(1) whether there is a public system of vaccination in these countries, and (2) whether the law states anything definite with respect to the number of "marks" to be made.

I am, Sirs, yours faithfully,

Cardiff, April 29th, 1895. T. GARRET HORDER.

MEDICAL ADVERTISING IN JOHANNESBURG.

'DR. SPEER," Johannesburg, has a very large advertisement in the *Star* of that place in the true newspaper style: "All skin diseases from whatever cause absolutely cured within a stated time," &c. The Medical Corporations of Great Britain are not responsible for "Dr. Speer's" methods. He boasts of being a graduate of the Medical Department of Harvard University, Class 74. It is for the authorities of that University to consider whether they should take any steps in regard to "Dr. Speer."

MEDICAL ADVERTISING.

WE append a further illustration of this disastrous and discreditable innovation in methods of practice. We omit the name and residence of the practitioner, which, however, appear on the bill.

"The Surgery, 434, Whitehorse-road, Thornton-heath. Hours: Morning, 10.30 to 12; Evening, 7.30 to 9; Sunday, 7 to 8.30 P.M. Fees: Medicine and Advice at Surgery, 1*s.*; Home Visit, with Medicine, from 1*s.* 6*d.*; Midwifery from 15*s.*; Vaccination, 1*s.*"

THE HACK TUKE MEMORIAL.

AN influential committee is being formed to raise a fund to perpetuate the memory of the late Dr. Hack Tuke by a prize, medal, or other means for the encouragement of the study of psychological medicine. The acting honorary secretary is Dr. Fletcher Beach, 64, Welbeck-street, W.

Just Qualified.—Manual of Practical Morbid Anatomy (Cambridge Natural Science Manuals), by A. A. Kanthack and H. D. Rolleston, Cambridge University Press. H. K. Lewis, 136, Gower-street, W.C. Price 4*s.* 6*d.*

During the week marked copies of the following newspapers have been received:—*Sussex Daily News, Whitehall Review, Bedford Advertiser, Liverpool Courier, Birmingham Gazette, North Eastern Daily Gazette, Hastings and St. Leonards News, North Wales Chronicle, Bridge of Allan Reporter, Stirling Saturday Observer, Ayr Observer, Oldham Standard, Ashton Standard, Gloucester Chronicle, Courrier de la Presse, Surrey Advertiser, Sutton Coldfield and Erdington Times, South London Press, Dewsbury Reporter, Guy's Hospital Gazette, Australian Medical Journal, Local Government Journal, Kerry Sentinel, Australasian Medical Gazette, Spalding Free Press, West Middlesex Advertiser, Ilfracombe Gazette, Coventry Times, Buckingham Observer, Banffshire Journal, Guernsey Star, Preston Herald, Leamington Spa Courier, St. Mary's Hospital Gazette, Rochdale Observer, North British Daily Mail, Irish News Home News, Todmorden Advertiser, Builder, Times of India, Architect, Citizen, Pioneer Mail, Manchester Evening Mail,* &c., &c.

Communications, Letters &c. have been received from—

A.—Dr. J. Althaus, Lond.; Dr. G. A. Abrath, Sunderland; Mr. M. F. Agar, Lond.; Mr. G. E. Aldridge, Weston-super-Mare; Mr. E. V. Allen, Lond.; Messrs. Armour & Co., Lond.; A M.O.H.

B.—Dr. Lauder Brunton, Lond.; Dr. J. W. Black, Edinburgh; Dr. Fletcher Beach, Kingston-hill; Mr. T. Bryant, Lond.; Mr. A. R. Burch, Lond.; Mr. W. Brown, Carlisle; Mr. E. S. Bishop, Manchester; Mr. C. Birchall, Liverpool; Mr. R. Bevan, Lydd; Mr. J. P. Balbirnie, Staveley; Mr. J. H. Bennett, Tientsin, North China; Mrs. Bradley, Lond.; Messrs. Burgoyne, Burbidges, and Co., Lond.; Birkenhead Borough Hosp., Sec. of; British Medical Benevolent Fund, Lond., Hon. Sec. of.

C.—Dr. J. Cagney, Lond.; Dr. C. W. Chapman, Lond.; Dr. A. M. Cafferata, Spa, Belgium; Dr. W. Carter, Weymouth; Mr. J. Carter, Lond.; Mr. E. Clarke, Andover; Mr. J. T. Campbell, Lond.; Mr. J. Crerar, Maryport; Messrs. Condy and Mitchell, Lond.; Messrs. Cassell and Co., Lond.; Cortland Wagon Co., Lond.; Chemische Fabrik, Rhenania, Aachen; Central Lond. Throat Hosp., Sec. of; Cottage Hospital; Cyphor, Lond.

D.—Dr. J. S. Darling, Lurgan; Dr. W. Donovan, Birmingham; Dr. R. Davidson, Halifax; Darlington Hosp., Sec. of.

E.—Dr. C. R. Elgood, Windsor; Mr. H. M. Earle, Chitral; Messrs. Eason and Son, Dublin; East Suffolk Hosp., Ipswich, Sec. of; *East Kent Gazette*, Sittingbourne, Publisher of.

F.—Dr. D. A. Fraser, Aden; Mr. J. A. Forsaith, Lond.; Mr. U. D. Fowler, Pendlebury; Mr. H. Freeman, Lond; Flower House, Catford, Med. Supt. of; F.R.C.S.

G.—Dr. W. R. Gowers, Lond.; Dr. J. Dundas Grant, Lond.; Mr. H. R. Greene, Woking; Messrs. J. P. Gray and Son, Cambridge; Messrs. R. W. Greeff and Co., Lond.; Messrs. Goddard Bros., Peterborough; General Post Office, Lond., Sec. of.

H.—Dr. F. Hawkins, Reading; Dr. G. Herschell, Lond.; Dr. W. S. Hedley, Brighton; Dr. W. A. Holmes, Barrow-in-Furness; Dr. G. Heaton, Birmingham; Mr. H. Hutchinson, Stockwell; Mr. A. Haviland, Douglas.

J.—Dr. R. Jenkins, Washington, U.S.A.; Mr. J. Heywood, Manchester; Mr. R. Hartley, Thirsk; Jeyes' Sanitary Compounds Co., Lond.; J. H., Lond.

K.—Dr. T. N. Kelynack, Manchester.

L.—Dr. Fletcher Little, Lond.; Mr. J. Ernest Lane, Lond.; Mr. G. Lane, Hotta, Orkney; Mons. A. Lacaye, Bordeaux; Messrs. Longmans and Co., Lond.; Lond. Vegetarian Soc., Sec. of.

M.—Dr. J. A. Mansell Moullin, Lond.; Dr. H. B. Moore, Colorado, U.S.A.; Mr. R. Mosse, Lond.; Mr. H. Milligan, Wigan; Mr. T. Moore, Croydon; Mr. J. Milner, Thetford; Mr. A. G. Mossop, Newhaven; Messrs. Morison, Pollesfen, and Blair, Lond.; Messrs. Macmillan and Co., Lond.; Mutual Life Assurance Co., New York, Gen. Manager of; Medico, Lond.; Medicus, New Bond-street.

N.—Nottingham Gen. Hosp., Sec. of; National Hosp. for Diseases of the Heart, Lond., Sec. of.

O.—Mr. G. H. Ormsby, Runcorn; Mr. W. P. O'Meara, Southampton; Messrs. Orridge and Co., Lond.; Messrs. Oliver and Boyd, Edinburgh; Ozone, Lond.; Omega.

P.—Dr. H. Page, Redditch; Dr. J. W. Pendley, Sharpe, U.S.A.; Mr. P. Pope, Lond.; Mr. H. C. Phillips, Southampton; Mr. J. V. Pestana, Singapore; Mr. C. H. Powers, Silloth; Purchaser, Lond.; Patience.

R.—Dr. A. M. Ramsay, Glasgow; Dr. J. B. Ryley, Lond.; Mr. W. Roberts, Bryn, North Wales; Mr. H. T. Roxby, Lond.; Mrs. R. Rickards, Lond.; Messrs. J. Richardson and Co., Leicester; Messrs. Roberts and Co., Lond.

S.—Dr. A. E. Sansom, Lond.; Dr. G. Sharp, Leeds; Dr. T. Shaw, Agar, Central India; Surg.-Capt. R. R. Sleman, Lond.; Mr. W. W. Smyth, Maidstone; Mr. W. Stamford, Tunbridge Wells; Miss J. L. Straton, Knaresborough; Messrs. G. Street and Co., Lond.; Messrs. J. J. Saint and Co., Carlisle; Messrs. Stubbs, Belfast; Sanitary Inspectors' Assoc., Lond., Sec. of; Stockton-on-Tees Borough, Town Clerk of; Statim, Lond.; A. S., Lond.

T.—Dr. C. B. Taylor, Nottingham; Dr. J. A. Thompson, Sydney, N.S.W.; Dr. G. B. Todd, Glasgow; Mr. L. Tait, Birmingham; Mr. T. W. Twyford, Hanley.

U.—Universal Cookery and Food Assoc., Lond., Hon. Sec. of; *United Service Magazine*, Lond., Editor of.

V.—Viavi Co., San Francisco.

W.—Mr. S. Wand, Leicester; Mr. E. S. Warburton, Treherbert; Mr. W. Roger Williams, Preston; Messrs. J. Wright and Co., Bristol; Messrs. W. Wood and Co., New York; *Westminster Review*, Paris, Editors of; *World, The*, Lond., Editor of; *Worcester Herald*, Publisher of; W., Merthyr Tydfil.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. E. Allen, Hawes; Dr. G. A. Abrath, Sunderland; Messrs. Armour and Co., Lond.; Audax, Leeds; A. M. K., Lond.; Arvonia.

B.—Dr. T. M. Buncle, Arbroath; Mr. T. Bryant, Lond.; Mr. Ball, Lond.; Mr. J. T. Buck, Eaton Socon; Mr. G. Barton, Lond.; Mrs. Behnke, Lond.; Mrs. S. A. Bennett, Lond.; Messrs. Black and Co., Lond.; Messrs. Brown, Gould, and Co., Lond.; B. H., Leicester.

C.—Dr. Collier, Bulwell; Mr. M. D. Cadell, Edinburgh; Messrs. A. H. Cox and Co., Brighton; Cato, Lond; C. F., Lond.; Chemicus, Lond.; Comfort, Lond.; Companion, Lond.; Crystal, West Croydon; Cumberland, Liverpool; Calcus, Lond.; C. H., Birmingham.

D.—Dr. J. Davies, Maesteg; Mr. S. G. Denton, Lond.; Messrs. Dowie and Marshall, Lond.; D. W. K., Lond.; D. W., Lond.; Delpha, Lond.; D. M., Lond.; Dona, Lond.

E.—Mr. J. M. Evans, Llandrindod Wells; E. A. S., Lond.; E., Newcastle-on-Tyne.

F.—Dr. Forsayeth, Attleborough; Mr. W. K. Fullylove, Bulkington.

G.—Dr. T. A. Goodfellow, Didsbury; Mr. W. H. O. Gardi, Erdington; Mr. W. Gilyard, Bradford.

H.—Mr. W. Hay, Hull; Mr. W. A. Hardiker, Brymbo; Mr. T. Hickling, Sulgrave; Mr. W. T. Hillier, Herne Bay; Mr. E. Hill, Lond.; Messrs. Hogg and Son, Lond.; Messrs. Hooper and Co., Lond.; Home for Epileptics, Maghull, Hon. Sec. of; H., Walton-on-Thames; H., Lond.; H. W., Ipswich; Honor, Lond.; H. R., Blackpool.

I.—Ixion, Lond.; Iris, Lond.

J.—Mr. Y. M. Jones-Humphreys, Aberceadidwyll; J. H., Lond.

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